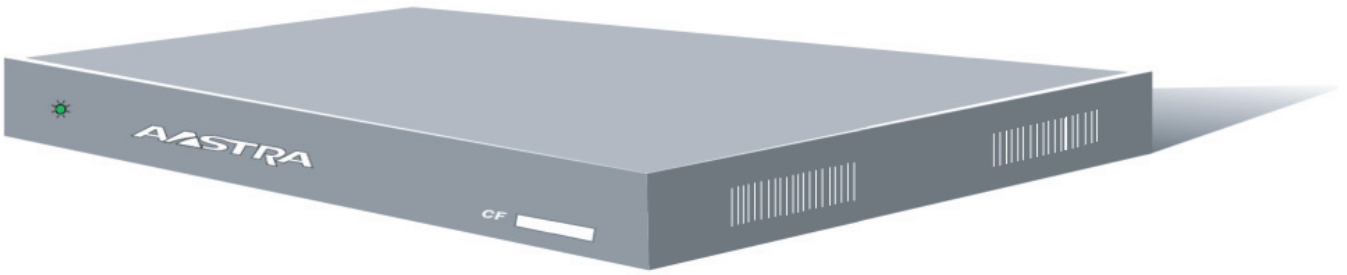
AastraLink *Pro* 160

41-001190-02
Rev 01

Administrator Guide
Release 1.2



Downloaded from www.Manualslib.com manuals search engine

*Aastra, Aastra Telecom, and the Aastra Telecom corporate logo are registered trademarks of Aastra Technologies, Limited. AastraLink, AastraLink Pro, AastraLink Pro 160, and AastraLink Pro, Model 160 are trademarks of Aastra Telecom US Inc. Microsoft, Microsoft Windows, and Internet Explorer are trademarks of Microsoft Corporation. Ethernet is a registered trademark of Xerox Corporation, Inc. UNIX is a registered trademark in the United States and other countries, licensed exclusively through The Open Group. Asterisk is a registered trademark of Digium, Inc. Linux is a registered trademark of Linus Torvalds. All other third-party trademarks (and registered trademarks) are the property of their respective owners.

© 2008 Aastra Technologies, Limited. All rights reserved. Information in this document is subject to change without notice. Aastra Technologies, Limited assumes no responsibility for any errors that may appear in this document.

Copyright 2008 Aastra Telecom. www.aastratelecom.com

All Rights Reserved.

Published in the USA

Downloaded from www.Manualslib.com manuals search engine

Contents

Preface

Chapter 1
Getting Started

What Does the AastraLink Pro 160 Do? 1-2
How Do I Set Up My AastraLink Network? 1-5
Required Tasks 1-6
Optional Tasks 1-6
What Does the AastraLink Web UI Allow Me To Do? 1-7
Can I Still Use the Phone UI? 1-7
AastraLink Pro 160 Emergency Call Support 1-9
Lifeline Phone 1-9
Emergency Call Priority 1-9
Emergency Call Support Important Notes 1-10
AastraLink Pro 160 Hardware and Software 1-11
Hardware Requirements 1-11
Software Requirements 1-13
Users and Privileges 1-13
Reference Documentation 1-14

Chapter 2
Using the AastraLink Pro 160 Web UI

Accessing the AastraLink Web UI 2-2
Using Your Web Browser to Access the AastraLink Web UI 2-2
Using Windows Explorer to Access the AastraLink Web UI 2-4
Administrator Menu Options 2-6
My Phone 2-11

Downloaded from www.Manualslib.com manuals search engine

Users 2-12
User List Menu 2-12
Groups Menu 2-12
Default Softkeys Menu (User Phone) 2-12
Reference 2-13
Configuration 2-14
System Menu 2-14
Network Menu 2-14
Dial Plan Menu 2-14
VoIP Menu 2-15
Auto-Attendant Menu 2-15
Maintenance 2-16
Current Status Menu 2-16
Call Records Menu 2-16
Backup & Restore Menu 2-16
Update Menu 2-17
Support Menu 2-17
Reference 2-17

Chapter 3
Configuring Aastra IP Phone Accounts

Accessing the Users Menu 3-3
Managing IP Phone Users 3-4
Adding User Accounts and Phones 3-5
Adding a User Account 3-10
Editing a User Account 3-15
Reference 3-15
Configuring a User's Keys on the Phone or Expansion Module in the User Account 3-20
Setting Softkey Permissions in the User Account (User or Administrator Phone) 3-25
Deleting a User Account 3-27
Enabling/Disabling User Accounts 3-29
Secondary Non-Aastra SIP Phones and Softclients 3-31
Enabling/Disabling an Extensions Directory Privacy 3-32

Downloaded from www.Manualslib.com manuals search engine

Uploading User Lists 3-34
Uploading User Lists if MBU 400s Connected to the AastraLink Pro 3-37
Configuring Groups 3-38
Ring Groups and Paging Groups 3-38
Dial Plan for Ring Groups 3-39
Dial Plan for Paging Groups 3-41
Virtual Extension Numbers (for Ring and Paging Groups) 3-42
Creating Rules for Groups (Ring and Paging Groups) 3-43
Distinctive Ringing (Ring Groups only) 3-45
Example of a Ring Group 3-47
Example of a Paging Group 3-48
Adding a Group 3-49
Configuring Additional Features for a Paging Group 3-51
Editing a Group 3-52
Deleting a Group 3-53
Reference 3-53
Default Softkeys (Users Menu) 3-54
Using the Default Softkeys Menu (User Phone) 3-55
Softkey Types (User Phone) 3-56
Call Settings Softkeys (User Phone) 3-57
Application Softkeys (User Phone) 3-60
Adding a Default Softkey (User Phone) 3-61
Editing a Default Softkey (User Phone) 3-62
Deleting a Default Softkey (User Phone) 3-62
Default Softkey Permissions (User Phone) 3-63
Default Softkeys for Expansion Modules (Administrator or User Phone) 3-64
Restoring Default Softkeys Back to Factory Settings 3-65

Chapter 4
Configuring AastraLink Pro 160 System and Network Parameters

Accessing the Configuration Menu 4-3
Configuring System Settings 4-4
Specifying Regional Settings 4-6
Specifying the Date and Time 4-10
Configuring the Music On Hold Option 4-11

Downloaded from www.Manualslib.com manuals search engine

Configuring Push Button Trigger Input or Relay Output 4-12
Configuring Visual Voicemail Settings 4-15
Configuring FXO Tuning Settings 4-17
Configuring Network Settings 4-21
Editing Local Network Settings 4-22
Editing Local Service Settings 4-26
Configuring Remote Office Support 4-31
Editing External Services Settings 4-34
Send Test Email 4-37
Configuring Dial Plan Settings 4-38
Local Dial Plan 4-40
Star Codes 4-41
Specifying Dial Plan Settings 4-41
Configuring a Dial Plan for Auto-Fax 4-45
Overview 4-45
FAX Indication Tones 4-45
FAX Call Re-routing 4-45
FXO Incoming Call Routing 4-46
Configuring FXO Lines for Manually Forwarding Auto-Fax 4-47
Configuring Overhead Paging 4-49
Configuring Paging and Intercom Options 4-50
Dial Plan for Meet-Me Conference Bridges 4-53
Host Capacity Limitations 4-54
Configuring an Emergency Dial Plan 4-54
Configuring Barred Numbers 4-55
Adding a Barred Number 4-56
Deleting a Barred Number 4-56
Configuring FXO Lines 4-57
Configuring FXO Lines for Incoming Calls 4-58
Configuring FXO Lines for Shared Line Appearance (SLA) 4-60
About Shared Line Appearances 4-60
SLA and the AastraLink Pro 4-61
SLA Key Mapping 4-62
Using AastraLink SLA from the SIP Phones 4-63

Downloaded from www.Manualslib.com manuals search engine

Configuring SLA on the AastraLink 4-63
Enabling/Disabling Individual SLA Memberships 4-64
SLA Configuration Changes 4-65
Configuring Abbreviations 4-67
Examples of Abbreviated Number Configurations 4-68
Configuring Abbreviated Numbers 4-71
Editing Abbreviated Numbers 4-72
Deleting Abbreviated Numbers 4-73
Configuring VoIP Settings 4-74
SIP Trunking 4-76
Incoming SIP trunk calls 4-77
Outgoing SIP trunk calls 4-77
Adding a SIP Trunk 4-80
Deleting a SIP Trunk 4-83
Single and Multiple SIP Trunks 4-84
SIP Direct Inward Dialing (DID) 4-86
Adding a SIP DID 4-87
Deleting a SIP DID 4-87
AastraLink Trunking 4-89
Configuration Parameters 4-90
Configuration Guidelines 4-91
AastraLink Trunking Example 4-91
Mobility Base Units (MBUs) 4-97
MBU Configuration Download from the AastraLink 4-99
Handset Registrations 4-99
Adding an MBU 4-100
Rebooting an MBU 4-110
Configuring Auto-Attendant 4-112
How Auto-Attendant Works 4-113
Settings for the Auto-Attendant 4-115
Configuring Settings for the Auto-Attendant 4-116
Custom Interactive Voice Response (IVR) 4-121
Custom IVR Configuration 4-122
Configuring a Custom IVR 4-123

Downloaded from www.Manualslib.com manuals search engine

Schedule for the Auto-Attendant 4-126
Holidays for the Auto-Attendant 4-130
Adding a Holiday to the Auto-Attendant 4-132
Deleting a Holiday from the Auto-Attendant 4-132
Custom Recordings 4-134

Chapter 5
Maintaining the AastraLink Pro 160

Accessing the Maintenance Menu 5-3
Viewing the Current System Status 5-4
Managing Call Detail Records (CDR reports) 5-5
About the Call Records Menu 5-5
Sorting CDR Columns 5-7
Viewing Call Detail Records 5-9
Downloading CDR Reports 5-9
Performing AastraLink Backup and Restore Tasks 5-10
Backup and Restore Guidelines 5-11
Backing Up AastraLink System Software 5-12
Restoring the AastraLink Configuration Database and Voicemail 5-14
Updating AastraLink System Software 5-15
Automatic Updates 5-17
Manual Updates 5-18
Support Information 5-21
Send Email to Aastra Support with Debug Reports 5-21
General Support 5-24

Chapter 6
AastraLink FAQs

How Does Network Addressing Work? 6-3
How Does IP Phone Auto-Configuration Work? 6-3
What is the Difference Between the Administrator Phone and User Phones? 6-4
Do I Ever Need to Re-Register IP Phones? 6-4
Can I Access My IP Phone Network From a Remote Office? 6-4
How Do I Assign An IP Phone To A Different User? 6-5
What Are Softkeys and How Do They Work? 6-5
What are Expansion Modules? 6-7

Downloaded from www.Manualslib.com manuals search engine

How Do I Obtain the IP Address Assigned to the AastraLink Pro 160? 6-9
Why Do My IP Phone Screens Look Different? 6-10
Why Does The Web UI Occasionally Time-out? 6-10
How Do I Maximize System Performance? 6-10
Does This Guide Describe How To Operate My IP Phone? 6-11
How Does Auto-Fax Work on the AastraLink Pro 160? 6-11
Does the AastraLink Pro Support Routing to a FAX over IP (FOIP) Device? 6-11
Can I Add More PSTN Gateways to Add More Than Six FXO ports? 6-12
Can I Link Multiple AastraLink Pros Using AastraLink Trunks for Making Toll-Free Calls? 6-12
Can I Create Custom Dial Plans on the AastraLink Pro? 6-12
Does My AastraLink Pro Support non-Aastra SIP Phones? 6-12
How Many Extensions Can the AastraLink Pro Host When SIP Trunking is Used? 6-12
If Custom “On Hold” Music is Enabled, Does it Play for Both Parked Calls and On-Hold Calls? 6-13
Does the AastraLink Pro Support Shared Line Appearance (SLA)? 6-13
How Do I Reduce the Initial Echo that Occurs at the Beginning of Each Call? 6-14
Can a Call Group Send a Voicemail to an Email Address? 6-14
Does the AastraLink Pro Support Analog Telephone Adapters (ATAs) for Adding More FXS Ports? 6-14
How do I Register a Generic SIP Device as a Secondary SIP Phone? 6-15

Chapter 7
Troubleshooting Solutions

Monitoring the AastraLink Status LED 7-3
Rebooting the AastraLink 7-5
Rebooting Using the Web UI 7-5
Rebooting Using the Reset Switch (Hard Reboot) 7-6
Restoring AastraLink Factory Default Settings 7-7
What Happens if I Restore Factory Default Settings? 7-7
Using the Reset Switch to Restore Factory Default Settings 7-7
What To Do After Restoring Factory Default Settings 7-8
Reinstalling System Software Using Recovery Mode 7-11
Automatic Recovery Mode 7-12
Manual Recovery Mode 7-13
Using The AastraLink Recovery Mode UI 7-14

Downloaded from www.Manualslib.com manuals search engine

Obtaining the IP Address of Your AastraLink Pro 160 7-14
Reprogramming the CompactFlash Card 7-17
Reprogramming the Onboard Flash 7-22
Uploading the .abf File to the CompactFlash 7-25
Repairing the File System, Bad Block, and or Database 7-26
Advanced Recovery Mode Tasks (Netconsole) 7-29
Using AastraLink System and Phone Log Files 7-31

Appendix A
Remote Office Configuration of the IP Phone (Phone-Side)

Preparing To Deploy Remote User Phones A-2
Registering IP Phones At the Central Site A-4
Connecting To The IP Phone Network From a Remote Office A-7
Configuring Port Information A-10
Reinstalling Aastra IP Phones at the Central Site A-13

Appendix B
Remote Office Configuration of the AastraLink Pro 160 (Server-Side)

Remote Office Configuration of the AastraLink Pro 160 ..... A-2
Description A-2
Network Diagram for Remote Phone Setup A-2
Configuring the AastraLink Pro 160 for Remote Office Setup A-4
1. UPnP Configuration A-4
2. Phone Configuration A-7
3. Remote Phone Installation A-7
AastraLink Pro 160 Manual Remote Office Configuration Example A-10

Index

Warranty

Regulatory information

Software licensing and copyright

Downloaded from www.Manualslib.com manuals search engine

Preface

About This Guide

Introduction

This guide provides information about the AastraLink Pro 160, and is intended for the system administrator who installs, configures, manages, maintains, and troubleshoots the unit.

The AastraLink Pro 160 is a Linux-based hardware unit that hosts the Asterisk open source Private Branch Exchange (PBX) software. You can use the AastraLink Pro 160 in small to medium Business, and Enterprise environments.

Other Documentation

The AastraLink Pro 160 documentation set also includes:

- ***AastraLink Pro 160 Quick Start Administrator's Guide*** - contains AastraLink Pro 160 installation and setup instructions. Describes how to install and register the Administrator IP phone, as well as instructions for how to access the AastraLink Web UI.
- ***AastraLink Pro 160 Quick Start User's Guide*** - Describes how to initially install user IP phones on your network, and how to register user IP phones with the AastraLink device.
- ***AastraLink Pro 160 IP Phone User's Guide*** - Designed for an Aastra IP phone end-user. Explains how to use the IP phone UI, or the AastraLink Web UI, to operate your IP phone on an AastraLink IP phone network.

Downloaded from www.Manualslib.com manuals search engine

Chapters in This Guide

This guide contains the following chapters:

For	Go to
Overview information about the AastraLink Pro 160	Chapter 1
Instructions on using the AastraLink Web UI	Chapter 2
Instructions on configuring IP phone User accounts	Chapter 3
Instructions on configuring network/system parameters	Chapter 4
Instructions on maintaining the AastraLink Pro 160	Chapter 5
FAQs about the AastraLink Pro 160	Chapter 6
Troubleshooting solutions	Chapter 7
Remote office configuration of the IP Phone (Phone-side)	Appendix A
Remote office configuration of the AastraLink Pro 160 (Server-side)	Appendix B

Downloaded from www.Manualslib.com manuals search engine

Chapter 1
Getting Started

Overview

Congratulations!! You have purchased a highly functional, cost-effective, easy-to-use AastraLink Pro 160 for use in your Enterprise network.

The AastraLink Pro 160 is Linux-based hardware that hosts the Asterisk open source Private Branch Exchange (PBX) software. The AastraLink Pro 160 acts as a private telephone network (or PBX) within an enterprise. Users of the AastraLink Pro 160 can direct dial internal extensions via the Voice over IP (VoIP) network. They can also share a number of outside lines for making telephone calls external to the AastraLink Pro 160.

The AastraLink Pro 160 is easy to install and operate, and provides a comprehensive set of security features you would expect from a state-of-the-art PBX.

The AastraLink Pro 160 is compatible with these Aastra IP phones and expansion modules:

- **675xi Series SIP IP Phones:** 6730i, 6731i, 6751i, 6753i, 6755i, 6757i, 6757i CT
- **9143i, 9480i, 9480i CT SIP IP Phones**
- **MBU 400 and DECT 420d handset**
- **Expansion Modules**: 536M and 560M

Downloaded from www.Manualslib.com manuals search engine

What Does the AastraLink Pro 160 Do?

The AastraLink Pro 160 provides full PBX functionality, including:

- Local SIP extensions, remote SIP users, SIP trunking
- Flexible voicemail with visual voicemail menus
- Operator console
- Custom announcements
  - — Auto-attendant (AA) with day/night/holiday scheduling with customizable Open and Closed Greetings, Main Menu prompts, Key Announcements, and Language Greetings (English, French, Spanish).
- Interactive Voice Response (IVR) with directory number and name dialing, and ability to disable the dial-by-name feature
- Shared Line Appearance (SLA) support that can be used with Redial, speeddial, 3-way conference, and call transfer.
- 3-way conference calling phone feature
- Meet-me conference bridge feature
- Busy lamp field monitoring (BLF)
- Flexible call forwarding (CFB, CFNA, CFA)
- Find-me, Follow-me (FMFM)
- Call Park (displays number on phone’s LCD as well as announcing number)
- Ring Groups and Paging Groups - Ring Groups have overflow feature and group member email notifications of new group voicemails.
- Remote call pickup
- Barred numbers
- Abbreviated Numbers and Shortcut Dialing
- Custom speed-dial
- User-configurable ring tones and Administrator-configurable distinctive ring

Downloaded from www.Manualslib.com manuals search engine

- Up to 6 Foreign Exchange Office (FXO) ports for connection to analogue public telephone lines (PSTN). Each FXO is equipped with on-hook CallerID detection and full G.168 echo cancellation. Also provides far-end FXO disconnect supervision.
- Auto-Fax using Auto-Attendant or manually using call forwarding on FXO lines (up to 6)
- Universal Plug-and-Play (UPnP) integration for easy setup of gateway/router and local network discovery from Microsoft Windows PCs.

Additional AastraLink Pro 160 features/functionality includes:

- Generates call detail records (CDRs) for external billing applications.
- Stores calling line ID (CLID) and calling name ID (CNID) in the missed calls and callers list.
- Network multiple AastraLink Pro 160 platforms across a LAN/WAN (identified by an IP address, public Internet name, or domain name service (DNS)).
- Local dialing plan and ability to define user dialing restrictions.
- Provides multiple simultaneous SIP trunk support for incoming SIP trunks.
- Offers “music on hold” feature that supports playing analog from an external input source, or digital from an uploaded *.wav* file.
- Overhead paging port for connection to an amplifier.
- Administrator can customize softkey list available on User’s or Administrator’s phones.
- Administrator can disable a User’s phone from appearing on the AastraLink Pro network without deleting or changing the configuration of that phone.
- Administrator can prevent an Administrator’s or User’s phone from appearing in the Corporate Directory.
- Dedicated Foreign Exchange Station (FXS) port for connection to a FAX machine.
- Dedicated FXS port for connection to an emergency analog phone in case of power failure.
- Input/output (I/O) port for relay output (activated by dialing an internal directory number (DIRN)).

Downloaded from www.Manualslib.com manuals search engine

- Input connection that can trigger an event notification on the AastraLink Pro 160. A triggered event can be sent as an email, Extensible Markup Language (XML) message sent to the phone UI, or as a recorded prompt for voice notification.
- System-wide SIP paging to all registered phones
- Easy configuration using an administrator Web interface (Web UI).
- Easy addition of multiple phones from a pre-defined User list (*.csv* file) via a bulk-update mechanism
- Support of inbound Direct Inward Dialing (DID) for SIP trunks (allows bypass of IVR menus)
- Email notification to Administrator when a remote user attempts access to the AastraLink Pro 160.
- Administrator can backup/restore the AastraLink Pro 160 platform using a Backup file (*.abf* file).
- Administrator can reboot multiple phones via the Web UI.
- Display of AastraLink Pro 160 status from Web UI during boot/reboot.
- Administrator can email AastraLink status and system config/debug information to Aastra Support.

Downloaded from www.Manualslib.com manuals search engine

How Do I Set Up My AastraLink Network?

This section describes what you need to do to set up your AastraLink network. It describes required tasks, as well as optional tasks.

The figure below shows a typical AastraLink Pro 160 network. An AastraLink network is comprised of an AastraLink Pro 160, and the Aastra IP phones that are registered with it.

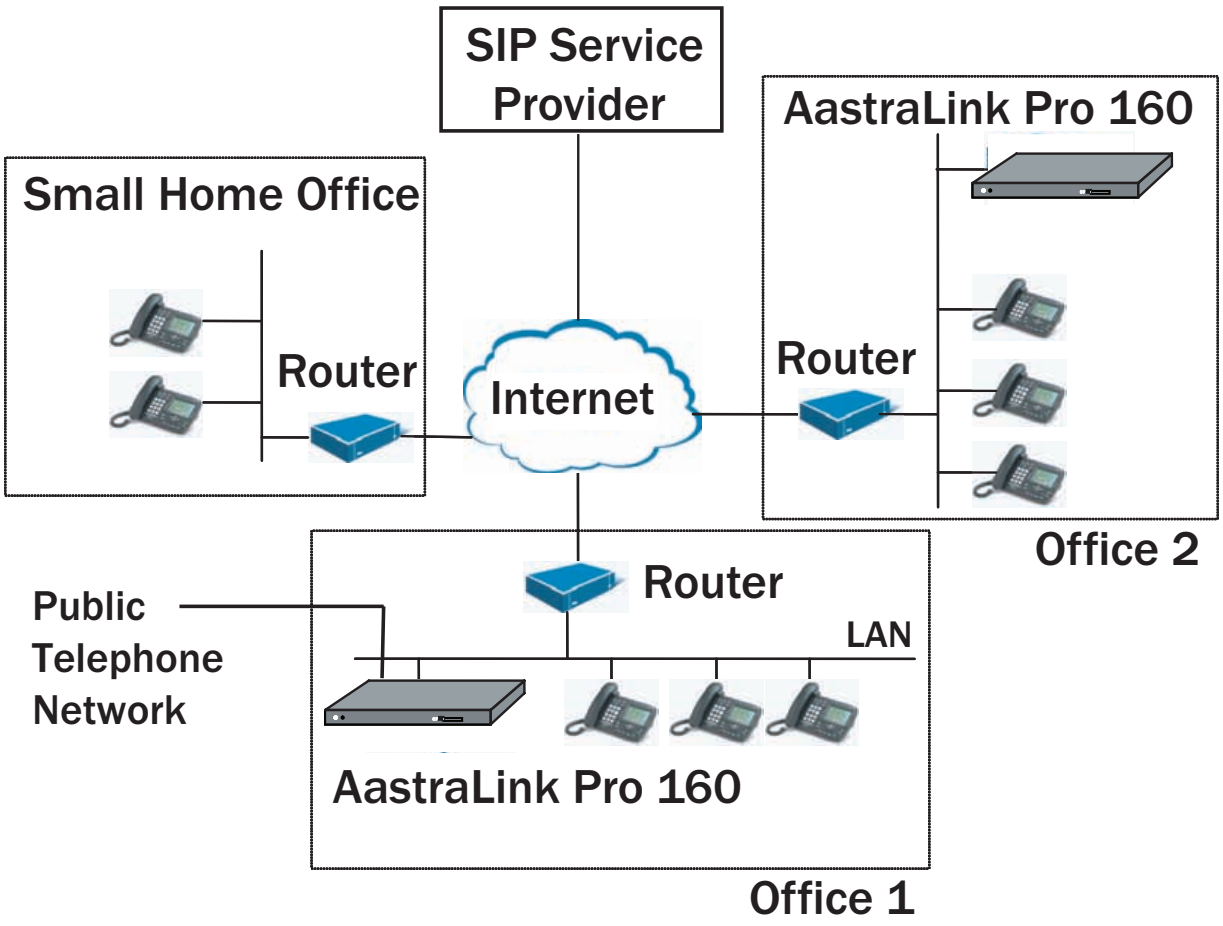


Figure 1-1. Sample AastraLink Pro 160 Network

Downloaded from www.Manualslib.com manuals search engine

Required Tasks

Setting up your AastraLink network is a three-step process as described below. Once you complete these three steps, the AastraLink Pro 160 and the Aastra IP phones on your network are fully operational, handling calls and processing data.

Step	Action	Refer To
1	Connect the AastraLink Pro 160 to your network (Administrator task.)	*Quick Start Administrator's Guide*
2	Install and register an administrator IP phone with the AastraLink Pro 160 device. (Administrator task.) • The first phone you register on a newly installed AastraLink Pro 160 is automatically configured as the Administrator phone, and is assigned as the Operator.	*Quick Start Administrator's Guide*
3	As administrator, you can configure and manage the phones and the AastraLink Pro 160 device on your network (including reassigning User/Admin/Operator privileges).	*See "Users and Privileges" on page 1-13*
4	Install and register user IP phones with the AastraLink Pro 160 device. (Administrator or User task.) • Enter the name/password for the user during IP phone initialization. • The AastraLInk automatically assigns the next free extension to the new phone.	*QuickStart User's Guide*

Optional Tasks

To customize your AastraLink network use the instructions described in this *AastraLink Pro 160 Administrator Guide* to:

- (Administrator's Phone) Configure call settings and view/delete call lists, view/delete voicemails, define additional softkeys, add directory contacts, modify user accounts, configure voicemail, or change your Administrator password.
- (User Phones) View/add User phones, reboot User phones, upload pre-specified User list (from *.csv* file), specify user groups, define additional softkeys on User phones in your network.
- View and configure AastraLink system settings, network settings, dial plan settings, VoIP settings, and/or Auto-Attendant settings.
- Perform maintenance, backup, and upgrade procedures.
- Register remote user phones.

Downloaded from www.Manualslib.com manuals search engine

What Does the AastraLink Web UI Allow Me To Do?

As administrator, you can use the AastraLink Pro 160 Web UI to:

- Configure and manage your own phone (make calls, handle calls, and enable features).
- Configure and manage the IP phones on the AastraLink network (define user accounts, configure default softkeys, manage phone directories, etc.).
- Configure, manage, and maintain the AastraLink Pro 160 device.

As an IP phone user, you can use the AastraLink Pro 160 Web UI to:

- Manage and configure your phone only.

Can I Still Use the Phone UI?

All administrative functions are done using the AastraLink Pro 160 Web UI. However, IP phone users can use either the Web UI, or the Aastra IP phone UI, to operate and configure their IP phones.

The following table shows the options available using the AastraLink Pro 160 Web UI and the Aastra IP phone UI.

Phone Option	Access From Web UI	Access from Phone UI
Dial a number	✔	✔
Manage your recent calls	✔	✔
Manage and use your phone directory	✔	✔
Configure and customize Administrator phone softkeys	✔	

Downloaded from www.Manualslib.com manuals search engine

Phone Option	Access From Web UI	Access from Phone UI
Enable phone features • Do Not Disturb • Call Forwarding • Find Me, Follow Me	 ✔ ✔ ✔	 ✔ ✔ ✔
Edit your Administrator preferences • Contact Information • Voicemail Preference • Change Password	 ✔ ✔ ✔	
Set phone preferences • Contrast Level • Set Audio (not available for 51i)		 ✔ ✔
View phone IP Address.	✔	✔
View AastraLink IP Address	✔	✔
View phone firmware version	✔	✔
Set phone to factory default settings		✔
Restart phone	✔	✔
Lock your phone		✔
Configure User accounts: • User preferences • Ring groups • Paging groups • Default softkeys • Default softkey permissions	 ✔ ✔ ✔ ✔ ✔	
Configure advanced phone features such as SLA, Directory Privacy, and Secondary Lines	✔	
Disable a User's or Administrator's phone from displaying in the Corporate Directory	✔	
Configure AastraLink network and system parameters	✔	
Configure Dial plan Settings	✔	
Configure VoIP settings	✔	
Configure Auto-attendant	✔	
Perform AastraLink system upgrade, backups, and maintenance tasks	✔	

Downloaded from www.Manualslib.com manuals search engine

AastraLink Pro 160 Emergency Call Support

Because IP phones and data networks require power to operate, they do not provide the fail-safe emergency calling capability of a traditional analogue phone. The AastraLink Pro 160 supports emergency calling in two ways:

- Lifeline Phone
- Emergency Call Priority

These features are described in detail in the next sections.

Lifeline Phone

The FXO Line 1 and FXS Phone B ports are labelled —♥— on the rear of the AastraLink unit. These ports provide capability for calling emergency services (also known as E911 in North America). In the event of power failure, the AastraLink Pro 160 hardware connects these two ports directly together, so that you can make an emergency call on FXO Line 1 using an analogue phone connected to the FXS Phone B port.

To ensure emergency call routing is available, we recommended that:

- You connect a traditional analogue phone to FXS B at all times, labelled as the E911 Lifeline emergency phone.
- When connecting telephone lines, connect the LifeLine FXO port first.

Emergency Call Priority

When the AastraLink Pro 160 is active, and an emergency call (by default, 911 or 9911 in North America) is made from an IP phone, it is preferentially routed to any available FXO line. If all FXO lines are in use, AastraLink Pro overrides any existing non-emergency call in progress on the Lifeline FXO and routes the emergency call in its place. Emergency Call Priority Override may take up to 15 seconds for the existing call to be cleared; an announcement plays during the override operation.

You can use the Web UI to provision emergency call numbers.

Downloaded from www.Manualslib.com manuals search engine

Emergency Call Support Important Notes

Note: The AastraLink Pro 160 guarantees only one emergency call at a time. If multiple emergency calls are attempted, callers may receive a message stating that all circuits are busy. A call placed from a phone connected to FXS B receives the highest priority; it will not be terminated, even by another 911 call. If a 911 call is made, and the only available FXO line is already in use by a phone connected to FXS B, then the AastraLink will attempt to place the 911 call using SIP trunking.

Warning: On remote phones connected to the AastraLink Pro 160, the following emergency related message displays: **"E911 calls are not available from this phone."** Remote IP phone users should **not** make emergency calls using the AastraLink Pro 160, because the location information will be incorrect. E911 regulations in the United States require street address location information be transmitted to the Public Safety Answering Point (PSAP). This information is provided by the telco, using the location of the analogue line connected to the AastraLink Pro 160 Lifeline port (FXO Line 1).

Downloaded from www.Manualslib.com manuals search engine

AastraLink Pro 160 Hardware and Software

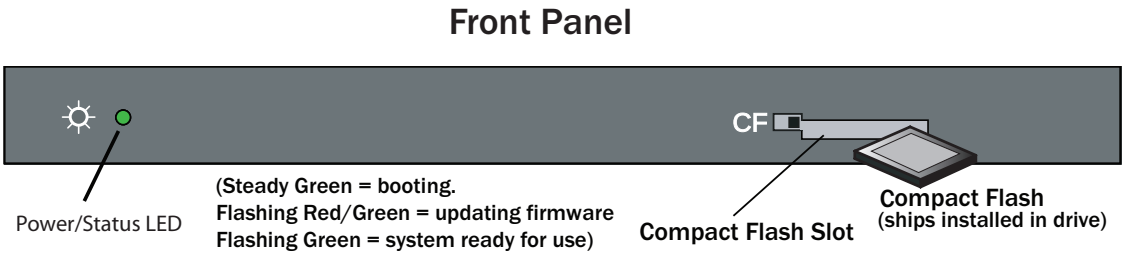
Hardware Requirements

Hardware	Minimum requirements
AastraLink Pro 160	Includes: • One AastraLink Pro 160 unit. • One 12V AC power adapter and cable. • One RJ45 Ethernet cable. • Six RJ11 phone cables. • One 512 MB CompactFlash memory card. • One set of rack mounting brackets with four Phillips head screws. • One wall mounting template, 3 plastic wall anchors, and 3 Phillips panhead screws. • One Quick Start Administrator's guide.
Additional Equipment required (but not included)	At least one Aastra IP Phone. The Aastra IP phones and expansion modules supported in this release include these models: • 9143i • 9480i, 9480i CT • 6730i • 6731i • 6751i • 6753i • 6755i • 6757i, 6757i CT • MBU and DECT 420d Handsets • 536M, 560M

Note: IP Phone Model 6753i supports the 536M expansion module. IP phone Models 6755i, 6757i, and 6757i CT support the 536M and the 560M expansion modules. Daisy-chained expansion modules are not recognized by the AastraLink Pro 160. The AastraLink Pro 160 supports a maximum of one expansion module per phone.

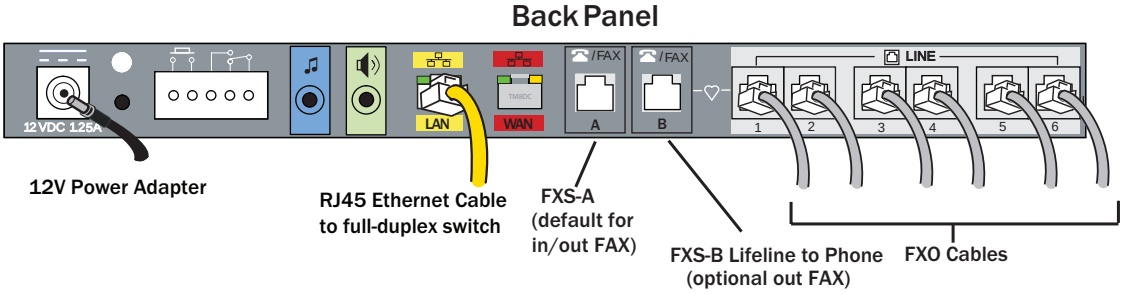
Downloaded from www.Manualslib.com manuals search engine

Front of AastraLink Pro 160



Note: See *"Monitoring the AastraLink Status LED"* on page 7-3 for additional LED descriptions.

Back of AastraLink Pro 160



Downloaded from www.Manualslib.com manuals search engine

Software Requirements

The following table provides the minimum software you need to use the AastraLink Pro 160 Web-based graphical user interface (Web UI).

Software	Minimum requirements
Web browser	A Web browser capable of Javascript, specifically Internet Explorer 6 and 7, Firefox 1.5 and 2, Opera 9, and Safari 2 and 3
DHCP server (optional)* *If DHCP is not available, ZeroConf is used instead. Static IP may also be provisioned after initial configuration is completed.	DHCP server providing one IP address (for example, 192.168.0.1/24)
FTP, TFTP or HTTP server.	Required only if recovery mode is used

Users and Privileges

The AastraLink Pro 160 supports two types of users: administrators and registered users, as follows:

- Administrators have access privileges to all AastraLink Pro 160 management features and functions. Administrators can manage and configure their phones, user phones, and manage and maintain the AastraLink Pro 160 device.
- Registered users can manage and configure their phones only.

You can also specify a person from either group (administrator or user) as “Operator.” The Operator has access to operator specific keys and the office voice mailbox. The administrator is also the designated Operator, by default.

Downloaded from www.Manualslib.com manuals search engine

Reference Documentation

For additional information about installing the AastraLink Pro 160, and installing and operating the Aastra IP phones in your network, see the following guides:

- *AastraLink Pro 160 Quick Start Adminstrator's Guide*
- *AastraLink Pro 160 Quick Start User's Guide*
- *AastraLink Pro 160 IP Phone User's Guide*

Downloaded from www.Manualslib.com manuals search engine

Chapter 2
Using the AastraLink Pro 160 Web UI

About this Chapter

Introduction

This chapter describes how to use to the AastraLink Web UI to configure and manage the AastraLink Pro 160 and the Aastra IP phones on your network.

Topics

This chapter covers the following topics:

Topic	Page
Accessing the AastraLink Web UI	page 2-2
Using Your Web Browser to Access the AastraLink Web UI	page 2-2
Using Windows Explorer to Access the AastraLink Web UI	page 2-4
Administrator Menu Options	page 2-6
My Phone	page 2-11
Users	page 2-12
Configuration	page 2-14
Maintenance	page 2-16

Downloaded from www.Manualslib.com manuals search engine

Accessing the AastraLink Web UI

This section describes how to use your web browser to access the AastraLink Pro 160 Web UI. You can login as an administrator, or as a user, as follows:

- Administrators have access privileges to all AastraLink Pro 160 management features and functions.
- Users can manage and configure their phones only.

There are two ways you can access the AastraLink Web UI:

- Enter the IP address of the AastraLink Pro 160 directly into the address field of your web browser, or
- Use Universal Plug-and-Play (UPnP) and Windows Explorer to locate the AastraLink Pro 160 on your network.

Using Your Web Browser to Access the AastraLink Web UI

The following procedure describes how to access the AastraLink Web UI.

Step	Action
1	Open your web browser and enter the IP Address or DNS hostname of the AastraLink Pro 160 in the address field. For example: http://10.20.50.135 **Note:** If you do not know the IP Address of the AastraLink, you can access it using an IP phone connected to the device. For instructions, see How Do I Obtain the IP Address Assigned to the AastraLink Pro 160? on page 6-9 of this guide. The AastraLink Web UI Login Menu appears (Figure 2-1).
2	Enter your phone extension, and password, and click Login The AastraLink Main Menu appears (Figure 2-3). **Note:** To log out, click **<logout>**, located in the upper right corner of the main menu.

Downloaded from www.Manualslib.com manuals search engine

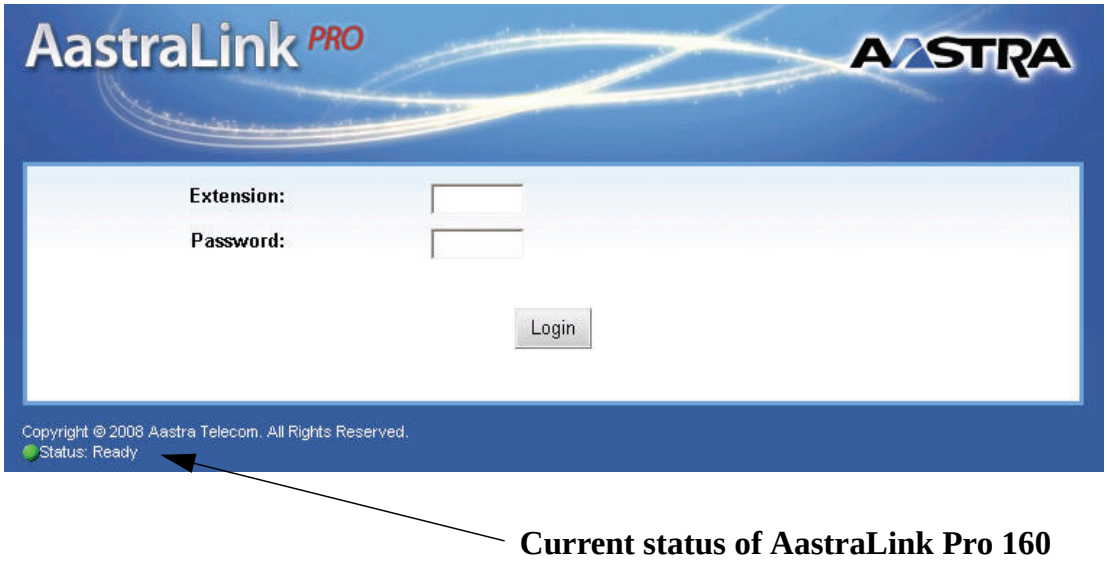


Figure 2-1. AastraLink Web UI Login Menu

Downloaded from www.Manualslib.com manuals search engine

Using Windows Explorer to Access the AastraLink Web UI

The following procedure describes how to use Windows Explorer to access the AastraLink Web UI.

Note: Prior to using this method to discover the AastraLink on your network, the Windows UPnP networking component must be installed on your computer.

Step	Action
1	Click on the **Start** menu, then click on **My Network Places.** Providing that your computer is UPnP enabled, then the AastraLink Pro 160 device icon appears in the My Network Places window. The IP Address assigned to the AastraLink device is listed. If there are multiple AastraLinks in your network, right-click the UPnP device icon and select Properties. A dialogue box appears that shows the IP address, serial number and hostname (model) of the selected device (Figure 2-2).
2	To access the AastraLink Web UI, double-click on the AastraLink device icon. A web browser launches and the AastraLink log in menu appears (Figure 2-1).
3	Enter your phone extension, and password, and click Login The AastraLink Main Menu appears (Figure 2-3). **Note:** To log out of the AastraLink Web UI, click **<logout>**, located in the upper right corner of the main menu.

Downloaded from www.Manualslib.com manuals search engine

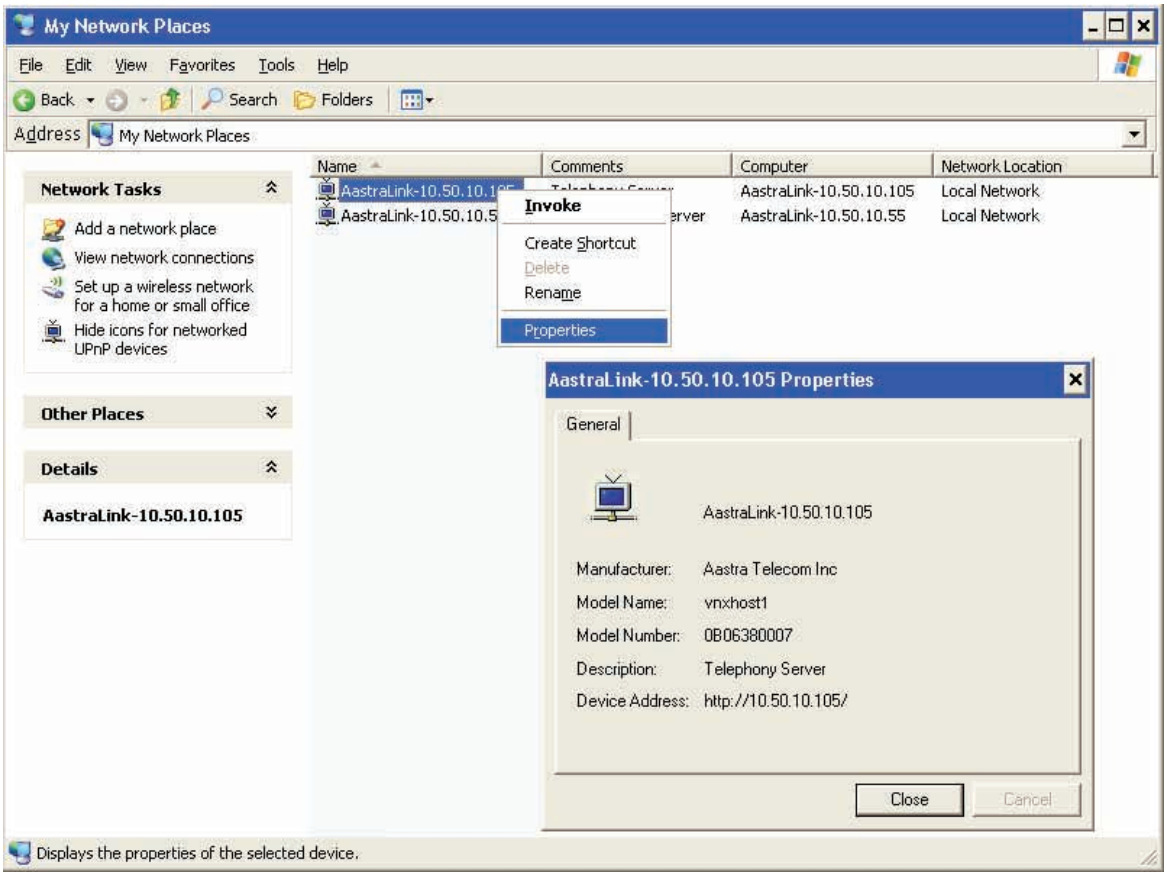


Figure 2-2. My Network Places Window

Downloaded from www.Manualslib.com manuals search engine

Administrator Menu Options

When you are logged in as administrator, you can use the AastraLink Web UI to configure your own phone, other Aastra IP phones, and the AastraLink device. The following illustration shows the AastraLink Main Menu after an administrator logs in.

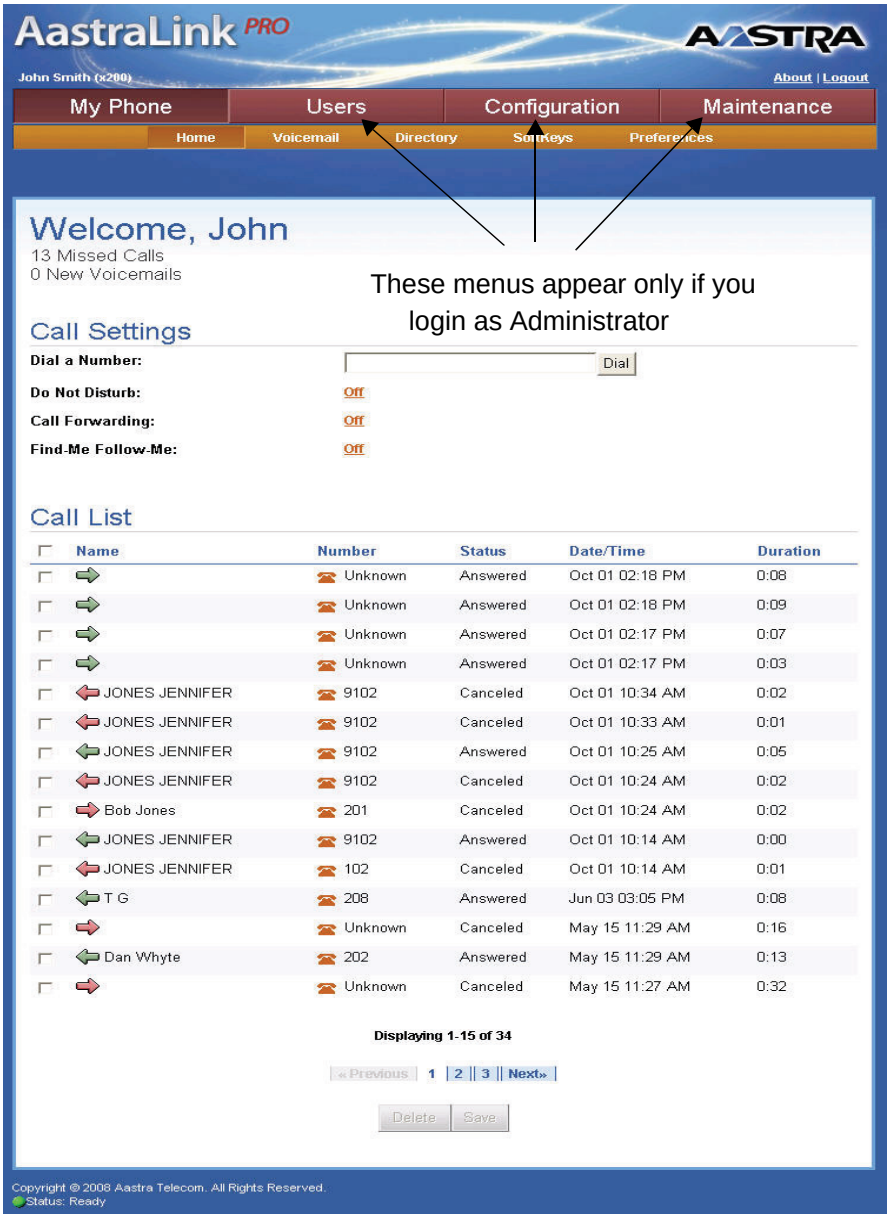


Figure 2-3. AastraLink Administrator Main Menu

Downloaded from www.Manualslib.com manuals search engine

The following illustration shows the AastraLink Main Menu after a User logs in. A User menu displays the My Phone menu and submenus only.

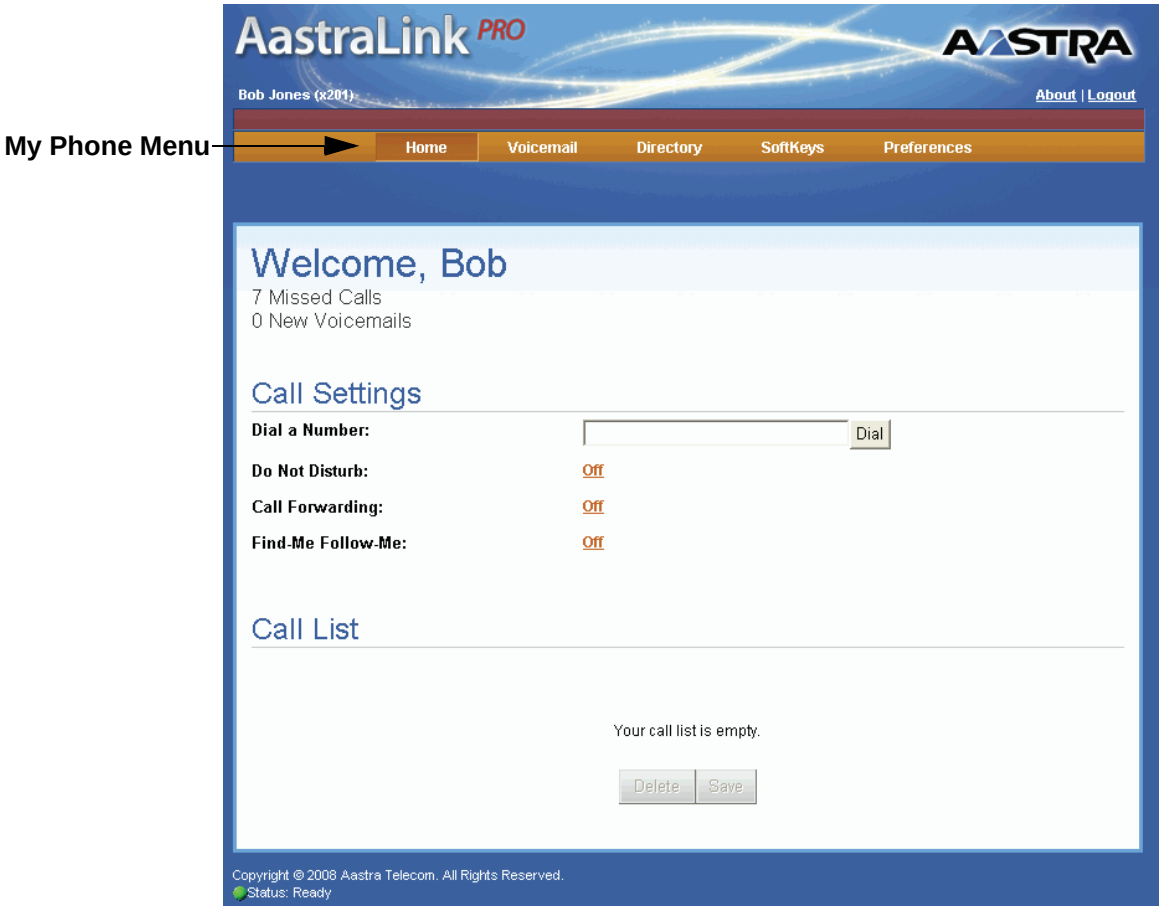
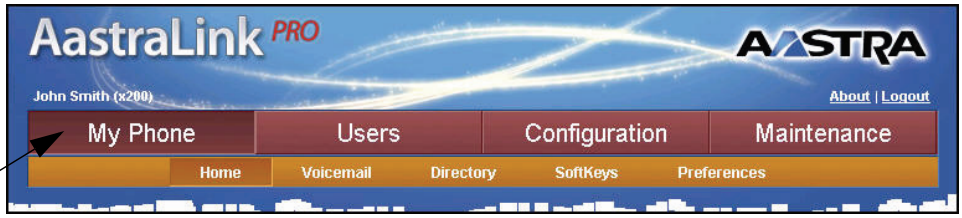


Figure 2-4. AastraLink User Main Menu

Downloaded from www.Manualslib.com manuals search engine

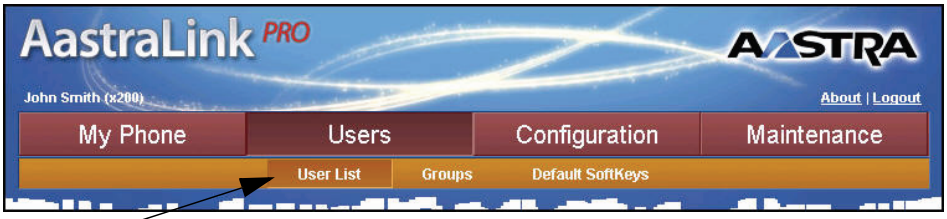
The Administrator Web UI is set up for easy navigation with various menus and a color-coded 3 level structure.

The first level menus (red) are the main task/activity items (**My Phone, Users, Configuration, Maintenance**). The first level menus do no change.



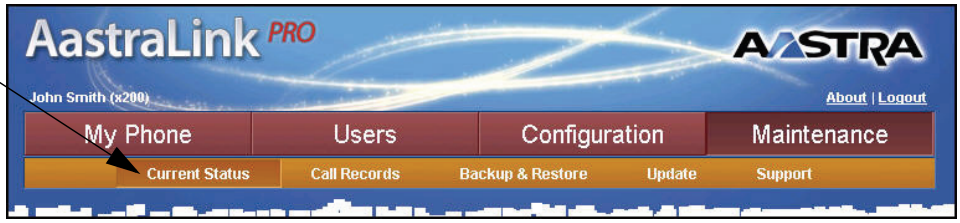
First level menus

The second level menus (amber) are the subsystem/category items. These menus change according to the first level menu selected.The following illustrations show the second level menus for the **Users** Menu and the **Maintenance** Menu.



Users Menu and Submenus

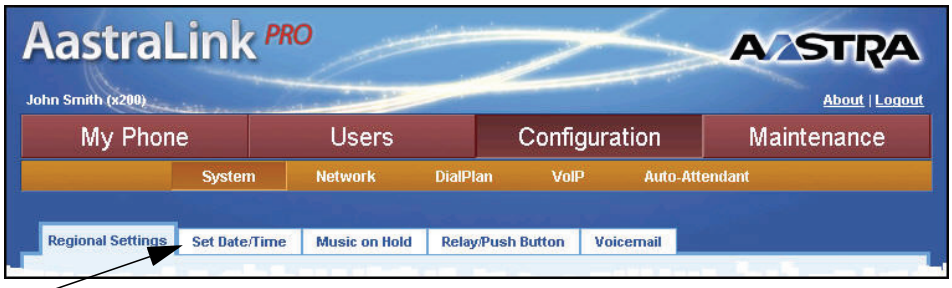
Second level menus are different depending on first level menu selected



Maintenance Menu and Submenus

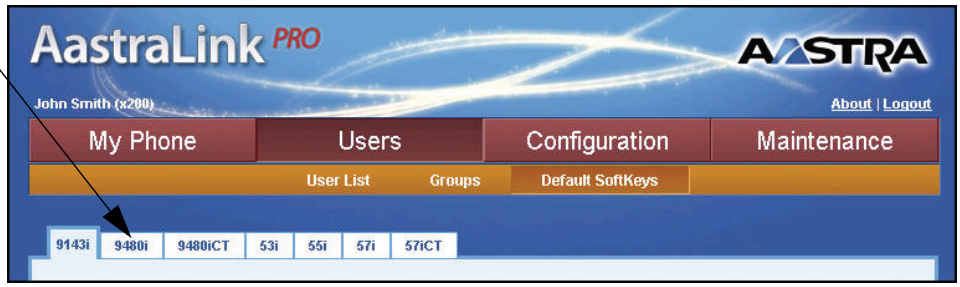
Downloaded from www.Manualslib.com manuals search engine

The third level menus (white) are tabs within the second level menus. These tabs change according to the second level menus selected. The following illustrations show the tabbed items on the **Configuration->System** Menu and the **Users->Default Softkeys** Menu.



Third level menus are tabs that are different depending on the second level menu selected.

Configuration/System Menu Tabs



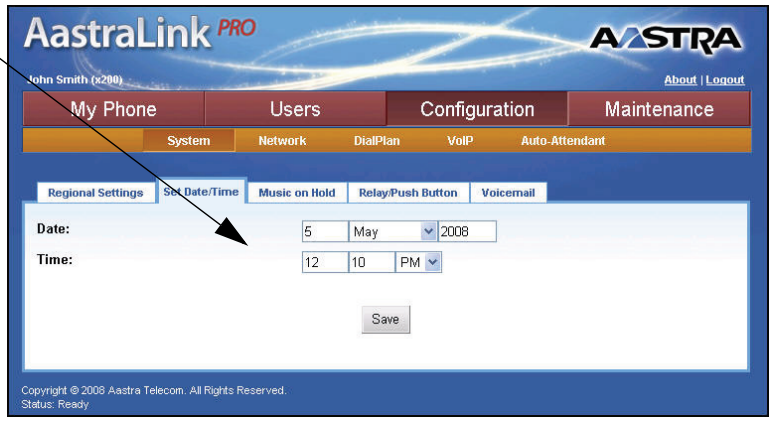
Users/Default Softkeys Menu Tabs

Downloaded from www.Manualslib.com manuals search engine

The parameters you can configure are on the final level within the menu structure.

My Phone/Preferences/My Profile Parameters

Configurable Parameters



Configuration/System/Date and Time Parameters

The following paragraphs describe the information in the AastraLink Pro Web UI, administrator menu structure.

Downloaded from www.Manualslib.com manuals search engine

My Phone

The *My Phone* menu displays the following submenus:

- **Home**
- **Voicemail**
- **Directory**
- **Softkeys** (Administrator's Phone)
- **Preferences**

Figure 2-5. My Phone Menu (Administrator)

The "**My Phone**" menu selections are the same as the "**My Phone**" menu selections in the User's GUI. For more information about the "**My Phone**" features and options, see the AastraLink Pro 160 User Guide.

Downloaded from www.Manualslib.com manuals search engine

Users

The *Users* menu displays the IP phones currently registered in your AastraLink Pro 160 network (with extensions). The list of phones includes the Operator (or administrator) phone as well as all user phones.

From the *Users* menu, you can view and/or configure the following:

User List Menu

- Upload User List
- Add a phone(s)
- Delete a phone(s)
- Pre-register the phones (individually or as bulk upload) so that they enter service automatically when connected to the network
- Reboot a phone or all phones
- Configure/edit operator and user accounts

Groups Menu

- Add/delete/edit a Ring Group(s) or Paging Group(s)

Default Softkeys Menu (User Phone)

- Configure/edit default softkey settings for all registered user phones in your AastraLink Pro 160 network. You can also reset these softkeys to their default values if required. The tabs that display in this menu are applicable to the following Aastra IP Phones: 9143i, 9480i, 9480i CT, 6730i, 6731i, 6751i, 6755i, 6757i, 6757i CT. You can also configure the MBU DECT 420d handset, and secondary, non-Aastra IP Phones.
- Specify default softkey permissions - this allows an Administrator to display which softkeys are available for users to self-provision at the path, "*My Phone->Softkey*".

Note: Softkeys disabled by the Administrator on the "softkey permissions" page are still configurable on a per-user basis by the Administrator, but cannot be configured by non-privileged users.

Downloaded from www.Manualslib.com manuals search engine

Reference

For more information about the *Users* Menu, see Chapter 3, “Configuring Aastra IP Phone Accounts.”

For more information about using non-Aastra IP Phones with the AastraLink Pro, see Chapter 3, the section “Secondary Non-Aastra SIP Phones and Softclients” on page 3-31.

Downloaded from www.Manualslib.com manuals search engine

Configuration

The *Configuration* menu displays the current system and network management settings. These settings apply to the AastraLink Pro 160 device.

From the *Configuration* menu, you can view and/or configure the following:

System Menu

- Specify regional settings
- Set date and time
- Configure Music on Hold
- Configure the Relay Push Button
- Specify the maximum duration of a voicemail and the maximum number of voicemail messages to store on the AastraLink Pro 160.
- Run the Auto-Tuning Wizard for the FXO lines or manually set the line dynamic range, echo cancel, RTP-to-line power, and line-to-RTP power parameters for FXO echo cancellation tuning.

Network Menu

- Specify local network parameters
- Specify local services
- Specify external services

Dial Plan Menu

- Specify dial plan settings (enable/disable phone registration, set SIP trunk mode, set FXS port 'hotline' operation, where going offhook automatically calls a preconfigured directory (or call group) number, set parked call timeout, set an administrator password, set an overhead paging PIN, and set paging and intercom parameters) for phones in your network
- Specify emergency numbers for phones in your network (not applicable to remote phones)
- Specify barred numbers (blocked numbers) for phones in your network

Downloaded from www.Manualslib.com manuals search engine

- Configure individual FXO lines for which incoming calls are routed. In addition to Default (which will send calls via the configured incoming call route on the auto-attendant page) and SLA, you can configure a specific target extension, a Ring Group, the Auto-Attendant, FXS phones, or the Operator. This feature also allows you to provision FXO lines regardless of the line state (i.e. even if there is no FXO line voltage) to enable for FXO loopback door entry phone use.
- Specify abbreviations to use on phones in your network

VoIP Menu

- Configure SIP trunks
- Add/delete SIP direct inward dialing (DID) numbers
- Configure AastraLink trunks
- Add, Delete, or reboot MBU 400 units in your AastraLink Pro network.

Auto-Attendant Menu

- Configure Open and Closed Greetings for the interactive voice response system (IVR) (Auto-Attendant)
- Configure a Custom Main Menu for the Auto-Attendant
- Configure a Custom Key Message for the Auto-Attendant
- Configure Language Greetings for the Auto-Attendant to use (English (default), French, Spanish)
- Schedule open and closed hours for each day of the week
- Specify open and closed hours for specific holidays
- Configure the Interactive Voice Response (IVR) system (dial by first name, dial by last name, upload custom menu, record custom greeting, specify keys to use in the IVR system menus)

Reference

For more information about the *Configuration* Menu, see Chapter 4, “Configuring AastraLink Pro 160 System and Network Parameters.”

Downloaded from www.Manualslib.com manuals search engine

Maintenance

The *Maintenance* menu displays system information and provides options for maintaining the AastraLink Pro 160 device.

From the *Maintenance* menu, you can view and/or configure the following:

Current Status Menu

- View serial number of the AastraLink Pro 160
- View percentage of voicemail usage
- View status of lines 1 through 6
- View LAN/WAN status
- Reboot the entire AastraLink Pro 160 system (including all connected phones)
- Shutdown the entire AastraLink Pro 160 system (including al connected phones)

Call Records Menu

- View and sort the Call Record log
- Download the current Call Record log
- Download the entire archive of Call Record logs stored on the AastraLink Pro 160.

Backup & Restore Menu

- Backup the current AastraLink Pro 160 configuration into an "*.abf*" file stored on your PC to use later if required.
- Restore a previously backed up AastraLink Pro 160 configuration from an "*.abf*" file stored on your PC.
- Reboot the entire AastraLink Pro 160 system (including all connected phones)

Downloaded from www.Manualslib.com manuals search engine

Update Menu

Automatic Updates

- Specify whether or not to you want the AastraLink Pro 160 to automatically check and install updates as required (options are notify only, install (reboots system when updates are found), download but don't install).
- Specify day and time to check for updates

Manual Updates

- Allows you to manually check for updates by clicking on a "Check" link.
- Allows you to browse a server to select an update and click "Upgrade" to upgrade the AastraLink Pro.

Support Menu

- Specify whether or not to send critical error debug information to Aastra Support for troubleshooting purposes.

Reference

For more information about the *Maintenance* Menu, see Chapter 5, "Maintaining the AastraLink Pro 160."

Downloaded from www.Manualslib.com manuals search engine

Downloaded from www.Manualslib.com manuals search engine

Chapter 3
Configuring
Aastra IP Phone Accounts

About this Chapter

Introduction

This chapter describes how you use the AastraLink Web UI to configure accounts that apply to all of the Aastra IP phones in your network. It provides instructions for managing users, creating user groups, and specifying global default softkey settings.

Note: You must be logged in as administrator to perform the tasks described in this chapter.

Topics

This chapter covers the following topics:

Topic	Page
Accessing the Users Menu	page 3-3
Managing IP Phone Users	page 3-4
Adding User Accounts and Phones	page 3-5
Adding a User Account	page 3-10
Editing a User Account	page 3-15
Deleting a User Account	page 3-27
Enabling/Disabling User Accounts	page 3-29

Downloaded from www.Manualslib.com manuals search engine

Topic	Page
Secondary Non-Aastra SIP Phones and Softclients	page 3-31
Enabling/Disabling an Extensions Directory Privacy	page 3-32
Uploading User Lists	page 3-34
Configuring Groups	page 3-38
Ring Groups and Paging Groups	page 3-38
Adding a Group	page 3-49
Editing a Group	page 3-52
Deleting a Group	page 3-53
Default Softkeys (Users Menu)	page 3-54
Using the Default Softkeys Menu (User Phone)	page 3-55
Softkey Types (User Phone)	page 3-56
Adding a Default Softkey (User Phone)	page 3-61
Editing a Default Softkey (User Phone)	page 3-62
Deleting a Default Softkey (User Phone)	page 3-62
Default Softkey Permissions (User Phone)	page 3-63
Default Softkeys for Expansion Modules (Administrator or User Phone)	page 3-64
Restoring Default Softkeys Back to Factory Settings	page 3-65

Downloaded from www.Manualslib.com manuals search engine

Accessing the Users Menu

You configure Aastra IP phone accounts from the **Users** menu, shown below.

Figure 3-1. Users Menu

Downloaded from www.Manualslib.com manuals search engine

Managing IP Phone Users

You manage Aastra IP phone users from the **Users->User List** Menu.

Click on the extension number link to edit a User's account

From this menu, you can edit user accounts, delete users from your IP phone network, add new users and phones, upload a pre-defined User List (*.csv* file which contains user and phone information), and/or remotely reboot individual or multiple IP phones. On the User screen, you can also view information about the user phones (MAC address, SIP DID Number, and Firmware Version).

Note: As DECT 420d handsets do not have an associated MAC address, a virtual MBU/Handset identifier is used instead.

The AastraLink Pro 160 is designed to allow zero-management for normal maintenance activities such as adding a new line to the system. Most customers will prefer to allow users to register and manage their own phone; however for customers who prefer a more traditional centralized management model, the option is available to add, remove and change IP phone and user accounts from the administrator Users menu.

Downloaded from www.Manualslib.com manuals search engine

Adding User Accounts and Phones

You can add new Users and phones to your network by clicking the **<Add Phones>** button on the User List screen.

Note: Adding users manually is provided as an alternative mechanism to the more usual method of auto-discovery and user self-registration. It is primarily used when the Administrator prefers to disable phone registration (*Configuration->Dialplan->Settings->Phone Registration*) and manually provision new IP phone users.

The following screen displays.

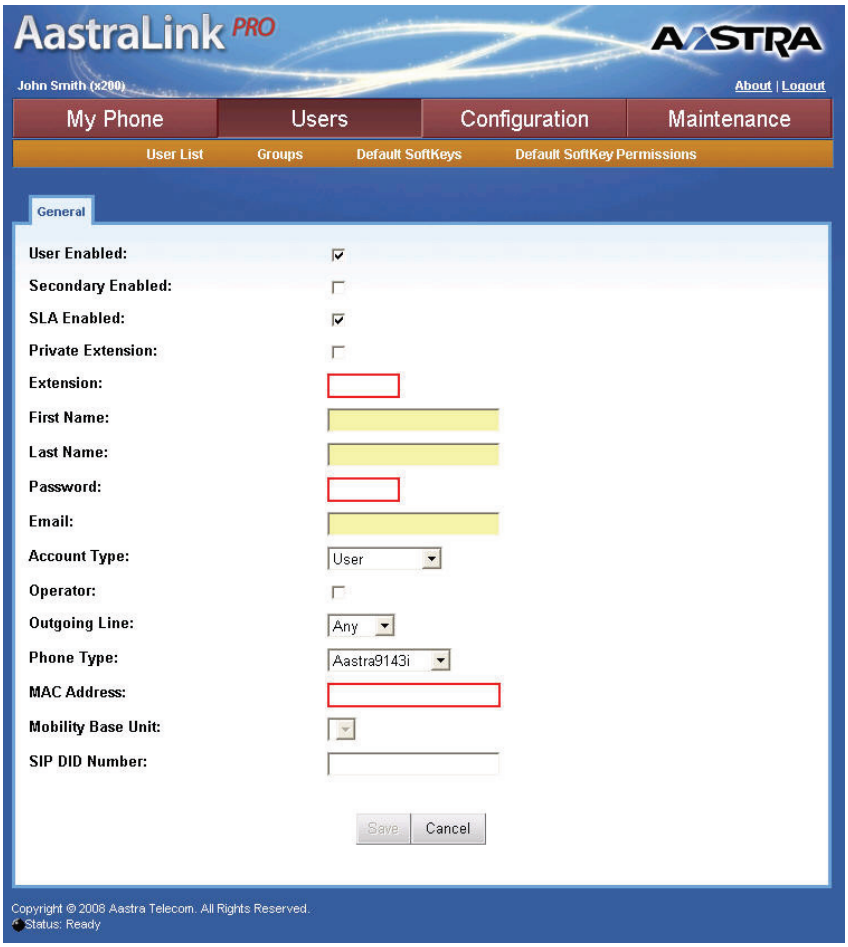


Figure 3-2. Add Users Screen

Downloaded from www.Manualslib.com manuals search engine

You can set the following Aastra IP phone user account parameters:

- **User Enabled**

  Enables or disables user accounts from obtaining service on the AastraLink Pro. Default is enabled. When a phone is disabled, it still retains the configuration for the phone in the system. Disabled accounts cannot make or receive calls, and cannot log into the Web UI. Also, the Corporate Directory lists only enabled accounts. For more information about configuring User Accounts, see “Enabling/Disabling User Accounts” on page 3-29.

- **Secondary Enabled**

  Enables or disables secondary non-Aastra SIP phone and softclient user accounts from obtaining service on the AastraLink Pro. Default is disabled. For information on the dial plan settings for a secondary phone on the AastraLink Pro, see “Secondary Non-Aastra SIP Phones and Softclients” on page 3-31.

- **SLA Enabled**

  Enables or disables the ability of this phone to participate in the Shared Line Appearance (SLA) feature. If disabled, the phone is accessible via PBX “pool line” dial plan only, and SLA calls do not route to this phone. Default is enabled.

Note: SLA is not supported on the DECT 420d handsets and 6751i model phones.

For more information about SLA, see Chapter 4, “Configuring FXO Lines for Shared Line Appearance (SLA)” on page 4-60.

- **Private Extension**

  Enables or disables directory privacy for individual extensions. If this feature is enabled, the User’s extension does not display in the Corporate Directory and is not listed in the dial-by-name directory. For more information about Private Extensions, see “Enabling/Disabling an Extensions Directory Privacy” on page 3-32.

Downloaded from www.Manualslib.com manuals search engine

- **Extension**

  Specifies the IP phone extension for this User or Administrator. You can specify any extension within the dial plan range you defined for your network. By default, the first phone registered with the AastraLink Pro 160 is assigned extension 200. When entering an extension the default valid range is 200 through 499, or 2000 through 4999, but the exact range pertains to the 'First extension' selection made by the administrator during the initial system configuration.

- **First Name**

  Specifies the first name of the User or Administrator.

- **Last name**

  Specifies the last name of the User or Administrator.

- **Password**

  Specifies the password set up for the User or Administrator.

- **Email**

  Specifies the email address of the User or Administrator.

- **Account Type**

  The Account Type defines the account type (Administrator or User) and associated privileges. An administrator can configure/use his own IP phone, manage other IP phones/users on the network, and manage and maintain the AastraLink Pro 160. A user can configure/use his phone only.

- **Operator**

  Specifies if this User or Administrator is also an Operator. By default, the first IP phone you register with the AastraLink Pro 160 (the Administrator phone) is also assigned Operator privileges. The IP phone acting in the role of Operator may be moved between users, but there must always be one phone designated as Operator.

Note: The DECT 420d handsets do not support a call-transfer softkey, and therefore, cannot be designated as the “Operator”.

Downloaded from www.Manualslib.com manuals search engine

- **Outgoing Line**

  Specifies which outgoing line this IP phone uses for outgoing calls. The term "outgoing line" refers to one of the 6 FXO ports that are located on the back of the AastraLink device.

  The default is **Any**. Alternatively, you can specify that this phone may only use a specific outgoing line for its calls. This is useful if different FXO lines have different originating CLID, and is usually used in combination with the ***Configuration->Dialplan->FXO Lines*** feature so that incoming and outgoing calls are routed using the same FXO line.

- **Phone Type**

  Specifies the model of this Aastra IP phone. Select the applicable phone from the list. After saving the User information page and then redisplaying the User information page to edit, this field becomes read-only.

- **Phone Firmware Version** *(display only, not editable)*

  Displays the current phone's (User or Administrator) firmware version currently installed and being used on the phone.

  IP Address *(display only, not editable)*

  Displays the current IP Address assigned to this phone (User or Administrator) used when the phone last registered to the AastraLink.

- **MAC Address** *(not applicable when adding/editing a 420d handset)*

  Specifies the MAC Address assigned to this IP phone. When adding or editing a phone in the AastraLink network, you must enter the applicable MAC address of the phone in this field. Not used for 420d handsets. Refer to the next bullet "Mobility Base Unit" for more information.

- **Mobility Base Unit** *(applicable to the MBU 420d handsets only)*

  Specifies the 420d handset and MBU number for which you want to apply the current phone information. This drop-down list shows the available handsets (max 8 per MBU) for all currently provisioned MBU-400 units, and is used instead the of MAC address field for 420d phone model.

Downloaded from www.Manualslib.com manuals search engine

- **SIP DID Number**

  Specifies the SIP Direct Inward Dialing (DID) number to this IP phone. A DID number is an individual telephone number assigned to this phone that allows an outside caller to dial directly from incoming SIP trunk calls to the users extension, without having to route via the Operator or IVR menu system.

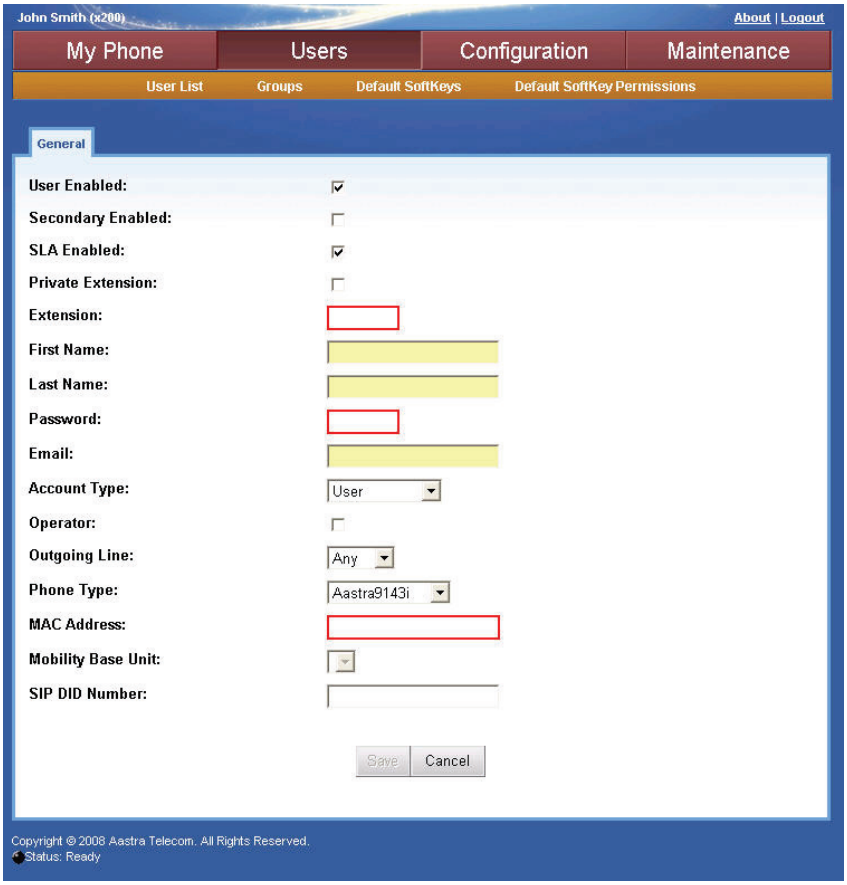
Downloaded from www.Manualslib.com manuals search engine

Adding a User Account

Use the following procedure to add a user account and phone to your network.

AastraLink Web UI

Step	Action
1	Select **Users->User List**
2	Click **<Add Phones>**. The following screen displays.



Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
3	The **User Enabled** field is enabled by default. If you want this User's phone to register in the AastraLink Pro network, leave this field enabled. If you disable this field, the phone will still retain its configuration in the system. However, the phone does not register on the network. Disabled accounts cannot make or receive calls, and cannot log into the Web UI. Also, the Corporate Directory lists only enabled accounts. For more information about enabling/disabling User Accounts, see "Enabling/Disabling User Accounts" on page 3-29.
4	The **Secondary Enabled** field is disabled by default. If you are adding a non-Aastra phone or a softclient user account, enable this field by placing a check mark in the Secondary Enabled check box. Skip this step if the phone you are adding is an Aastra IP Phone and keep this field disabled. For more information about adding secondary phones to your AastraLinnk Pro network, see "Secondary Non-Aastra SIP Phones and Softclients" on page 3-31.
5	The **SLA Enabled** field is enabled by default. Shared Line Appearance (SLA) is configured on a per FXO basis on the AastraLink Pro. If this field is enabled, you must enable an FXO line as SLA at the location ***Configuration->Dial Plan->FXO Lines***. If disabled, the phone is accessible via PBX "pool line" dial plan only, and SLA calls do not route to this phone. Default is enabled. SLA key mapping (L1, L2, etc.) varies by phone model. **Note:** SLA is not supported on the DECT 420d handsets and 6751i model phones. For more information about configuring SLA on the AastraLink Pro, see Chapter 4, "Configuring FXO Lines for Shared Line Appearance (SLA)" on page 4-60.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
6	The **Private Extension** field is disabled by default. This field enables or disables directory privacy for individual extensions. If this feature is enabled, the User's extension does not display in the Corporate Directory and is not listed in the dial-by-name directory. If you do not want the current extension to display in the Corporate Directory, place a check mark. For more information about enabling/disabling private extensions, see "Enabling/Disabling an Extensions Directory Privacy" on page 3-32.
7	In the **Extension** field, enter an extension to assign to the new user. You can specify any extension within the dial plan range you defined for your network. By default, the first phone registered with the AastraLink Pro 160 is assigned extension 200. When entering an extension the default valid range is 200 through 499, or 2000 through 4999, but the exact range pertains to the 'First extension' selection made by the administrator during the initial system configuration
8	In the **First Name** field, enter the first name of the new User or Administrator.
9	In the **Last Name** field, enter the last name of the new User or Administrator.
10	In the **Password** field, enter the password to assign to this new User's or Administrator's phone.
11	In the **Email** field, enter the email address of this new User or Administrator.
12	In the **Account Type** field, select whether the user and user's phone is an Administrator or User.
13	If this user is also the Operator, click on the **"Operator"** check box. The first IP phone registered with the AastraLink Pro 160 is registered as both an administrator, and Operator, by default. **Note:** The DECT 420d handsets do not support a call-transfer softkey, and therefore, cannot be designated as the "Operator".

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
14	If required, specify a line (line 1 - line 6) for this extension to use for all outgoing calls in the **"Outgoing Line"** field. Valid values are **Line 1** through **Line 6.** The default is **Any** line. This field specifies which outgoing line this IP phone uses for outgoing calls. The term "outgoing line" refers to one of the 6 FXO ports that are located on the back of the AastraLink device. Alternatively, you can specify that this phone may only use a specific outgoing line for its calls. This is useful if different FXO lines have different originating CLID, and is usually used in combination with the ***Configuration->Dialplan->FXO Lines*** feature so that incoming and outgoing calls are routed using the same FXO line.
15	In the **Phone Type** field, select the phone type for this user. Valid values are: • **Aastra9143i** • **Aastra9480i** • **Aastra9480i CT** • **Aastra6730i** • **Aastra6731i** • **Aastra6751i** • **Aastra6753i** • **Aastra6755i** • **Aastra6757i** • **Aastra6757i CT** • **Aastra420d** Default is **Aastra9143i**. **Note:** Before selecting the value, **Aastra420d**, you must add an MBU unit(s) to the AastraLink Pro using the Web UI at the location, ***Configuration->VoIP->Mobility Base Units***. Once an MBU is registered, the administrator can provision extensions for individual handsets on this "Add Phone" page, and then select the "**Aastra420d**" phone type.
16	*(Not applicable to the 420d handse)* In the **MAC Address** field, enter the MAC address of the phone for this user. You can find the MAC address of the phone on a label on the bottom of the phone. This field specifies the MAC Address assigned to this IP phone. When adding or editing a phone in the AastraLink network, you must enter the applicable MAC address of the phone in this field. **Note:** If you select a value of "**Aastra420d**" in step 15, this MAC Address field is grayed-out. This field does not apply to an MBU 420d handset.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
17	*(For MBU units only)* If you selected a value of **"Aastra420d**" for the Phone Type in step 15, in the **Mobility Base Unit** field, select the 420d handset for which you want to apply this user information. This field specifies the 420d handset and MBU number for which you want to apply the current phone information. This drop-down list shows the available handsets (max 8 per MBU) for all currently provisioned MBU-400 units, and is used instead the of MAC address field for 420d phone model. For more information about adding MBUs to your AastraLink network, see Chapter 4, "Mobility Base Units (MBUs)" on page 4-97.
18	In the **SIP DID Number** field, enter the SIP DID number for this user's phone. The DID number is the number that an outside caller can dial to reach this phone directly without having to go through the company's PBX. The DID is a direct dialed number to this phone.
19	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Editing a User Account

An administrator can edit registered phones to change the identity of the user account associated with the phone. (For example, the Administrator can edit the extension, users name, password, etc.). The following illustration shows a User account that an Administrator can edit.

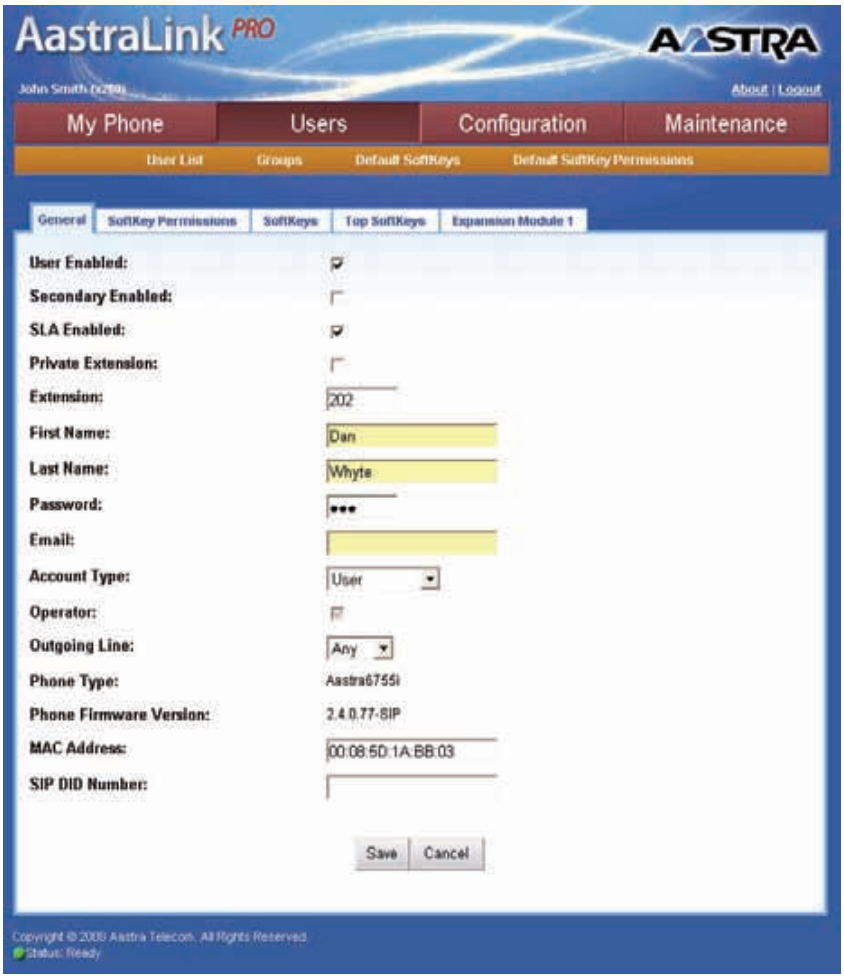


Figure 3-3. Edit Users Screen

Reference

Refer to the description of each field in the above illustration on page 3-6.

Downloaded from www.Manualslib.com manuals search engine

Use the following procedure to edit a user account.

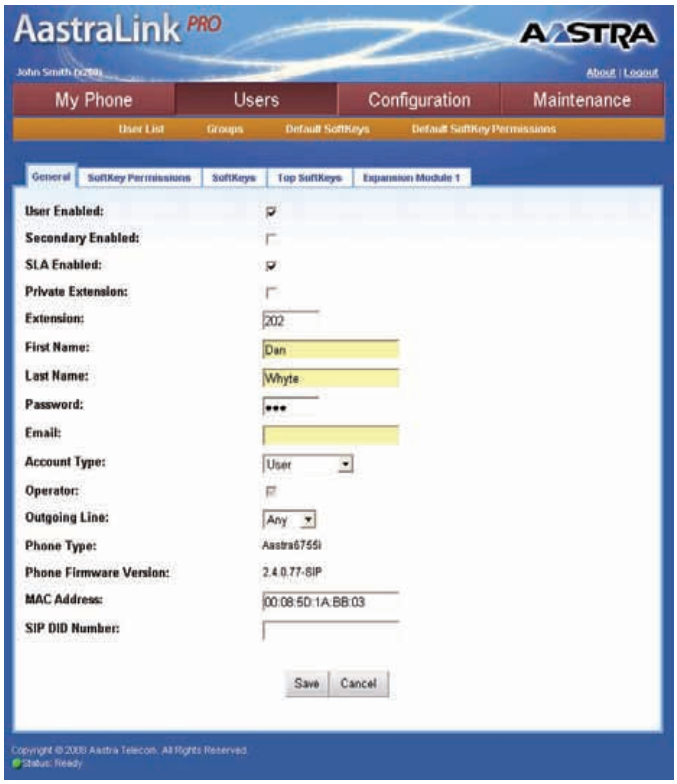
Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
1	Select **Users->User List**

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
2	Click on the extension for the user account you want to edit.  The user account appears. You can edit personal information from this menu, specify the user type (administrator or user), and view the phone model, IP address and MAC address assigned to this phone. **Note:** You can also set specific key types (depending on the User's phone model) for the phone, and specify which key types display for a User to select from. The administrator is not restricted by the softkey subset defined in the "Default Softkey Permissions" and the target user account "Softkey Permissions". Administrators can therefore, assign specific softkeys to a user, which the user themselves is not permitted to modify. For more information about setting key types on the phone, see "Configuring a User's Keys on the Phone or Expansion Module in the User Account" on page 3-20. For more information about setting softkey permissions on a User's phone, see "Setting Softkey Permissions in the User Account (User or Administrator Phone)" on page 3-25.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
3	Edit the user account parameters as required (**User Enabled, Secondary Enabled, SLA Enabled Private Extension**, **Extension, First Name, Last Name, Password, Email)**. For information on configuring these specific fields, refer to the procedure, “Adding a User Account” on page 3-10.
4	Specify whether or not this user is an administrator in the **“Account Type”** field.
5	If this user is also the Operator, click on the **“Operator”** check box. The first IP phone registered with the AastraLink Pro 160 is registered as both an administrator, and Operator, by default.
6	If you wish, specify a line (line 1 - line 6) for this extension to use for all outgoing calls in the **“Outgoing Line”** field. The default is Any line.
7	Modify the **MAC Address** if required.
8	Modify or delete the **SIP DID Number** if required. The DID number is the number that an outside caller can dial to reach this phone directly without having to go through the company’s PBX. The DID is a direct dialed number to this phone.
9	Click **<Save>** to save your changes.

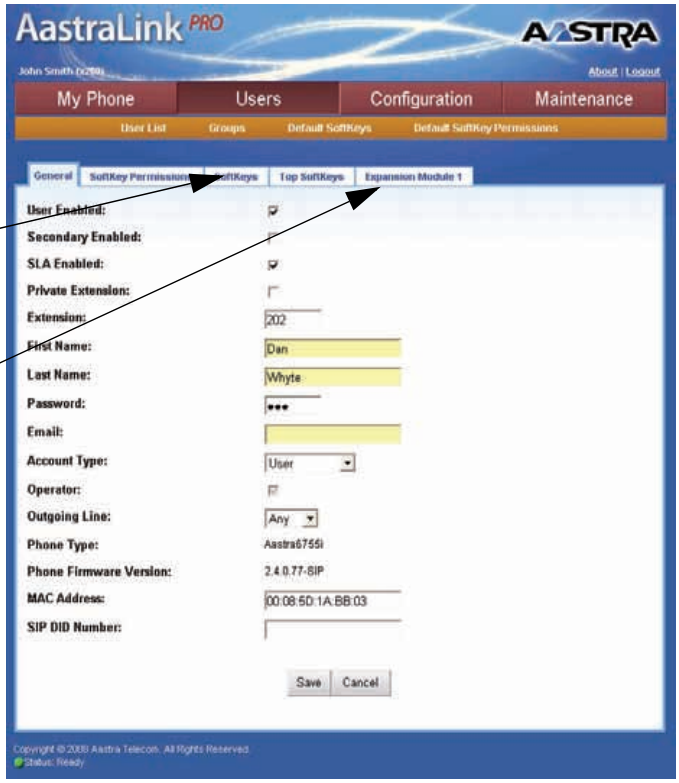
Downloaded from www.Manualslib.com manuals search engine

Configuring a User's Keys on the Phone or Expansion Module in the User Account

An Administrator can assign key types to the the softkeys or programmable keys (dependant on the User's phone model), and/or expansion modules keys on their IP Phone. If applicable to their phone, the softkeys, programmble keys, or expansion module tab displays when editing a User's account.

A softkey/programmable key tab displays dependant on the User's phone model.

An expansion module tab displays if an expansion module is attached to the User's phone.



Downloaded from www.Manualslib.com manuals search engine

The applicable key page displays after selecting the softkey/programmable key/ expansion module key tab. The following example shows a 6755i phone's softkey key page.

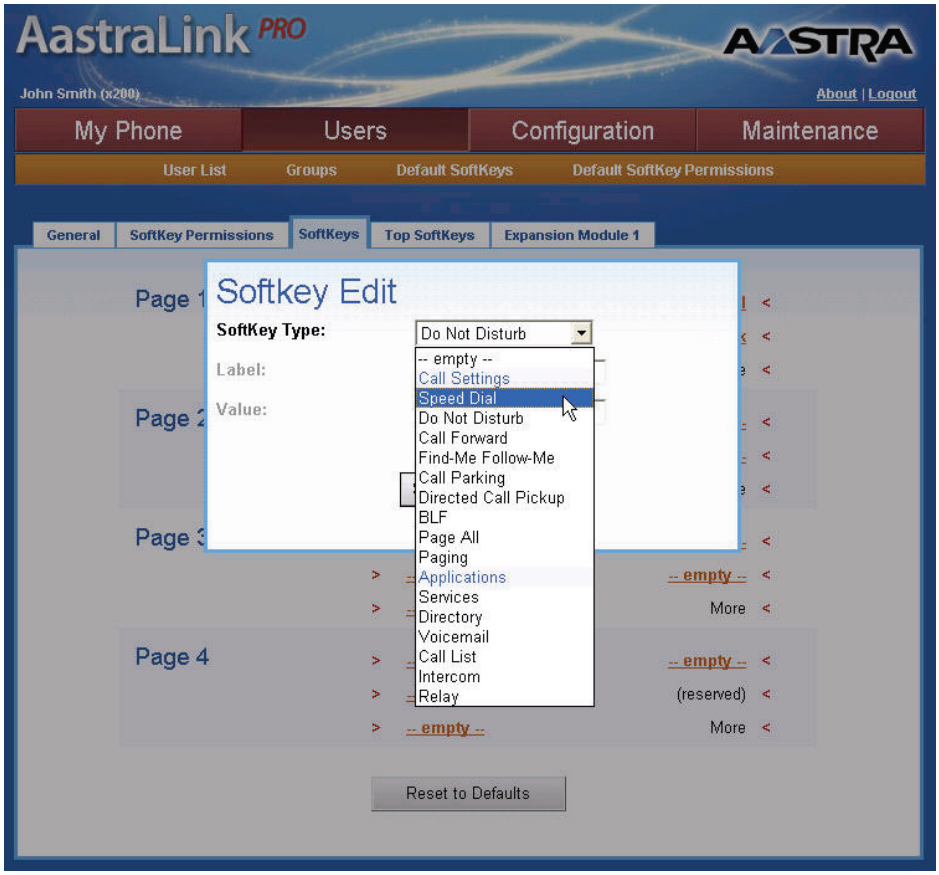
The **default keys** that display are dependant on the User's phone model. You can also change the default softkeys at the location ***Users->Default Softkeys***. For more information about changing the default softkeys on a phone, see "Default Softkeys (Users Menu)" on page 3-54.

The Administrator can override a phones current softkey settings and reset it to the **Default Softkeys** template by clicking <**Reset to Defaults**>.

If applicable to the User's phone model or expansion module, a **<Print Label>** key displays for you to print a label to insert next to the physical key on the phone after configuring the key.

Downloaded from www.Manualslib.com manuals search engine

You can assign key types to the keys on the User's phone by clicking on each key field. The following prompt displays.



This page allows you to specify a key type for the key. The key types in the list may vary depending on the User's model phone. For more information about keys types on the User's phone, see "Softkey Types (User Phone)" on page 3-56.

The list of key types can be customized by the Administrator if required. To customize the list of key types on the User's phone, see "Setting Softkey Permissions in the User Account (User or Administrator Phone)" on page 3-25.

Downloaded from www.Manualslib.com manuals search engine

Use the following procedure to add, edit, or delete a key type on a User's phone.

Adding a Key Type (User or Administrator Phone)

Use the following procedure to add/define a new key type for a User's phone.

AastraLink Web UI

Step	Action
1	Select **Users->User List-><select a user>.**
2	Click on the **Softkeys, Top Softkeys, Programmable Keys**, or **Expansion Module** tab. The tab that displays is dependant on the User's phone model you are editing.
3	Click on an **<empty>** softkey.
4	Select the **"Softkey Type"** from the pull-down menu, then click **<Save>.** **Notes**: **1.** The key types that display in the list are dependant on the User's phone model. **2.** If you are configuring a Speeddial or BLF softkey, you must also assign a label/value to the softkey. See "Softkey Types (User Phone)" on page 3-56 for more information.

Editing a Key Type (User or Administrator Phone)

Use the following procedure to edit an existing key type for a User's phone.

AastraLink Web UI

Step	Action
1	Select **Users->User List-><select a user>.**
2	Click on the **Softkeys, Top Softkeys, Programmable Keys**, or **Expansion Module** tab. The tab that displays is dependant on the User's phone model you are editing.
3	Click on the softkey you want to edit.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
4	Select a different **"Softkey Type"** from the pull-down menu.
5	Click **<Save>** to save your changes. **Notes**: **1.**The key types that display in the list are dependant on the User's phone model. **2.**If you are configuring a Speeddial or BLF softkey, you must also assign a label/value to the softkey. See "Softkey Types (User Phone)" on page 3-56 for more information.

Deleting a Key Type (User or Administrator Phone)

Use the following procedure to delete a key type from a User's phone.

AastraLink Web UI

Step	Action
1	Select **Users->User List-><select a user>.**
2	Click on the **Softkeys, Top Softkeys, Programmable Keys**, or **Expansion Module** tab. The tab that displays is dependant on the User's phone model you are editing.
3	Click on the softkey you want to delete.
4	In the **Softkey Type** field, select "**empty**" from the pull-down menu, and click <**Save**>. The key type is removed from the User's phone.

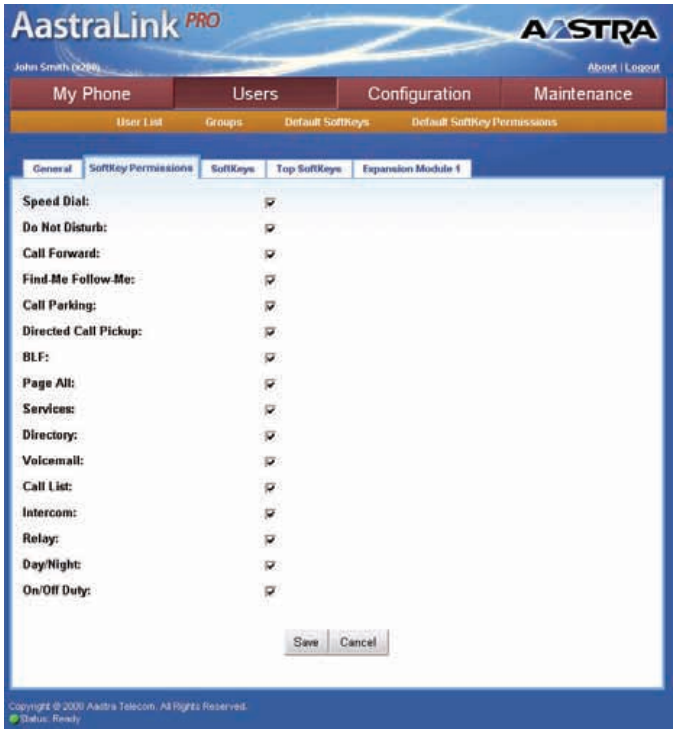
Downloaded from www.Manualslib.com manuals search engine

Setting Softkey Permissions in the User Account (User or Administrator Phone)

An Administrator can specify the key types that are available to a User or Administrator to select from when that User is configuring keys on their phone. When an Administrator specifies these softkey permissions, only the softkeys enabled on the **Softkey Permission** page will display on the User's phone for the user to select from when configuring softkeys.

Use the following procedure to set softkey permissions for an Administrator or User.

AastraLink Web UI

Step	Action
1	Select **Users->User List-><select a user>->Softkey Permissions.** 

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
2	The available softkeys on an Administrator's or User's phone display in the **Softkey Permissions** page. All softkeys are enabled by default. To disable a softkey, click on a box to uncheck it. Available softkeys are dependant on the Model of the Administrator's or User's phone. If you disable a softkey, that softkey does not display in the Administrator's or User's softkey list.
3	Click <**Save**> to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Deleting a User Account

An administrator can delete a user account associated with a registered phone. When you delete a User account, all associated information is deleted from the AastraLink Pro. (For example, the extension, first name, last name, password, etc.).

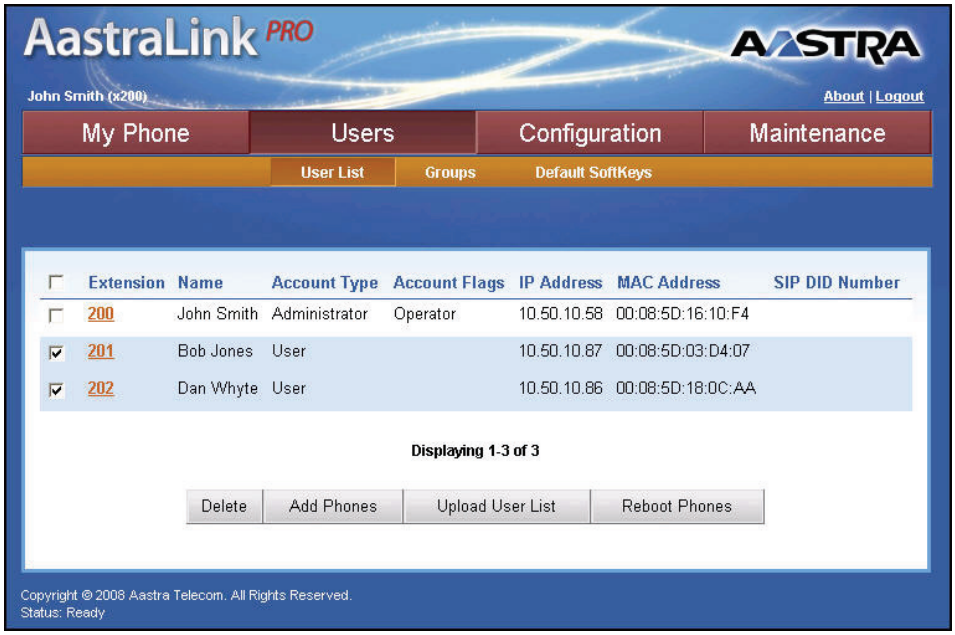


Figure 3-4. Delete Users Screen

Downloaded from www.Manualslib.com manuals search engine

Use the following procedure to delete a user account.

AastraLink Web UI

Step	Action
1	Select **Users->User List**
2	Click on the extension for the user account or accounts you want to edit. **Note:** You can select an individual user account or multiple user accounts. **Click here to select all user accounts**
3	Click **<Delete>**.
4	When prompted, click **<Yes>** to confirm your action. The user account(s) you deleted no longer appear in the User List.
5	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Enabling/Disabling User Accounts

An Administrator can enable or disable user accounts from obtaining service on the AastraLink Pro. When the account is disabled, it still retains the configuration for the phone in the system. Disabled accounts cannot make or receive calls, and cannot log into the Web UI. Also, the Corporate Directory lists only enabled accounts.

Note: The currently logged in Administrator can disable User accounts and other Administrator accounts. The logged-in Administrator cannot disable his own account nor the Operator account.

You can disable user accounts using the Web UI at the location, ***Users->User List-><select an existing user or click Add Phone>->General.***

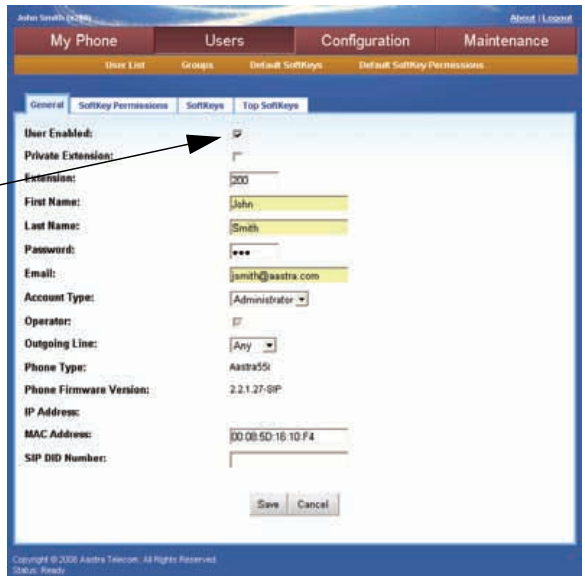
Use the following procedure to enable/disable a User account.

AastraLink Web UI

Step	Action
1	Select **Users->User List-><select an existing user or click Add Phone>->General.**
2	The "**User Enabled**" field is enabled by default. To disable this field, click the check box to remove the check mark from the box.
3	Click **<Save>** to save your changes.

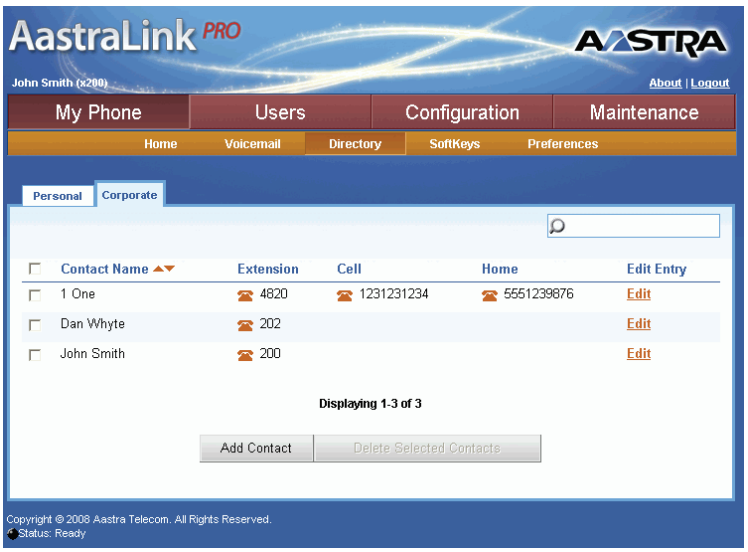
Enable user by placing a check mark in the box

Disable user by removing check mark from the box



Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
	When you disable this field for a User, "**Disabled**" displays in the User List page in the "**Account Flags**" column. "**Disabled**" displays for the applicable User in the User List
	In the above example, the User "Bob Jones", extension 201 is diabled, and does not display in the Corporate directory as shown below. The Corporate Directory is located at ***My Phone->Directory->Corporate***. **User Bob Jones, ext. 201 does not display in the Corporate Directory** 

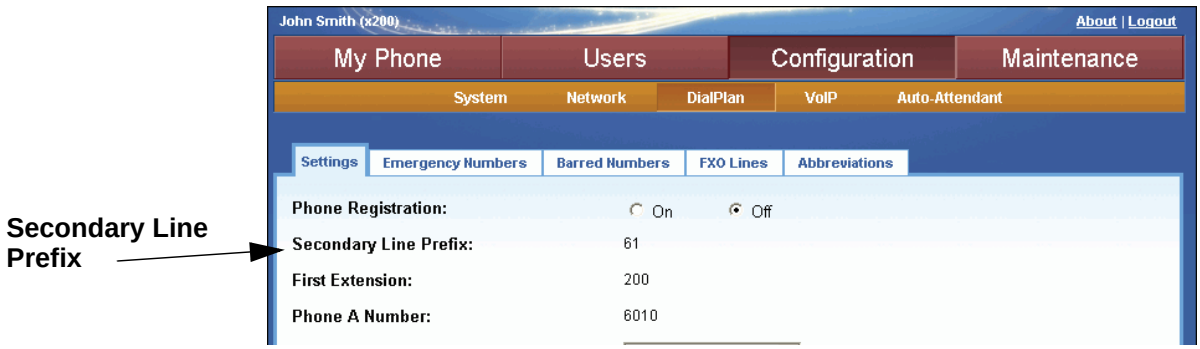
Downloaded from www.Manualslib.com manuals search engine

Secondary Non-Aastra SIP Phones and Softclients

The AastraLink Pro 160 supports non-Aastra SIP terminal and softclient generic accounts. These phones are not directly able to be dialed, but ring in parallel with the primary Aastra phone for which they are associated.

Outgoing calls may be placed from the generic SIP device, and calls support direct signaling; therefore enhanced capabilities such as video softclients may be used between each generic SIP device.

The account registration information is 61 + primary extension (e.g. 61200) and the password for registration is the users voicemail password/Web UI login.The dialplan line prefix for the secondary phone displays as "**61**" at the location ***Configuration->Dialplan->Settings*** as shown in the following illustration.



Note: Secondary phones are intended to be used in conjunction with a primary Aastra SIP desk phone. Therefore, a secondary phone is disabled if the primary SIP phone has not recently registered to the AastraLink. Also, if any of the primary phone account information is changed, the generic account is disabled until the Aastra phone re-registers with Asterisk (this can be instantaneous or require some time if the Aastra phone requires a reboot).

To add a secondary SIP phone to the AastraLink Pro network, see "Adding User Accounts and Phones" on page 3-5.

Downloaded from www.Manualslib.com manuals search engine

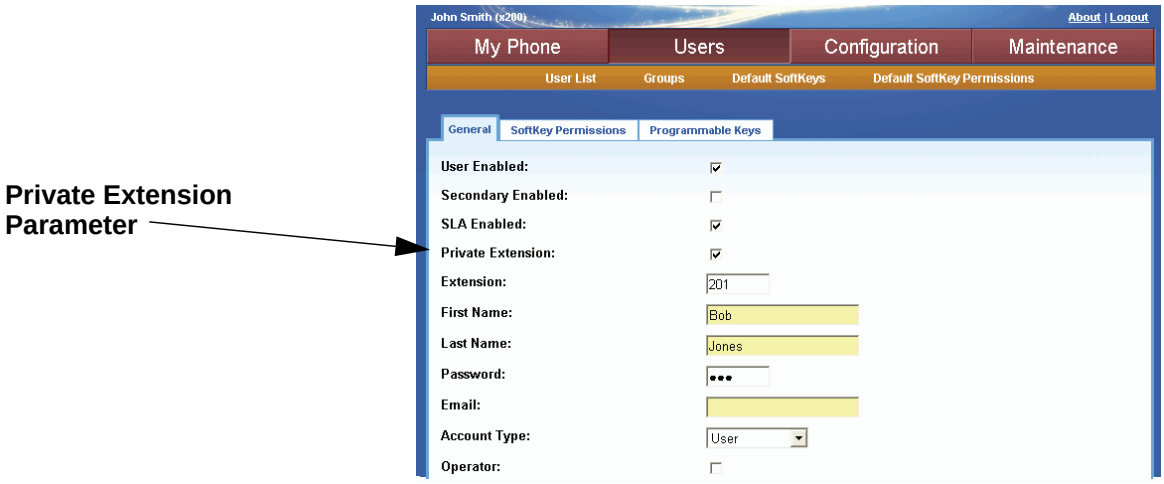
Enabling/Disabling an Extensions Directory Privacy

An Administrator can enable or disable individual extensions (User and Administrator extensions) from displaying in a Corporate Directory. If this feature is enabled, the User's extension does not display in the Corporate Directory and is not listed in the dial-by-name directory. By default, the Private Extension feature is disabled.

You enable or disable private extensions at the location ***Users->User List-><select an existing user or click Add Phone>->General***.

Use the following procedure to configure a private extension.

AastraLink Web UI

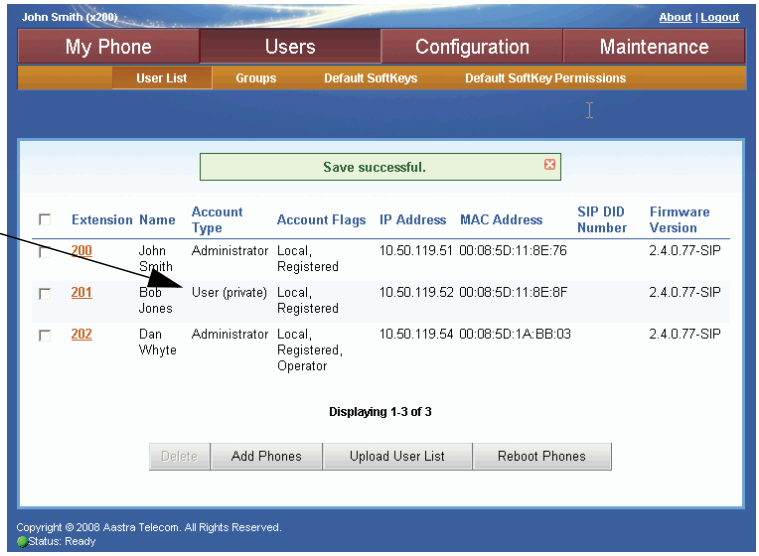
Step	Action
1	Select **Users->User List-><select an existing user or click Add Phone>->General.**
2	The "**Private Extension**" field is disabled by default. To enable this field, click the check box to place a check mark in the box. 
3	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

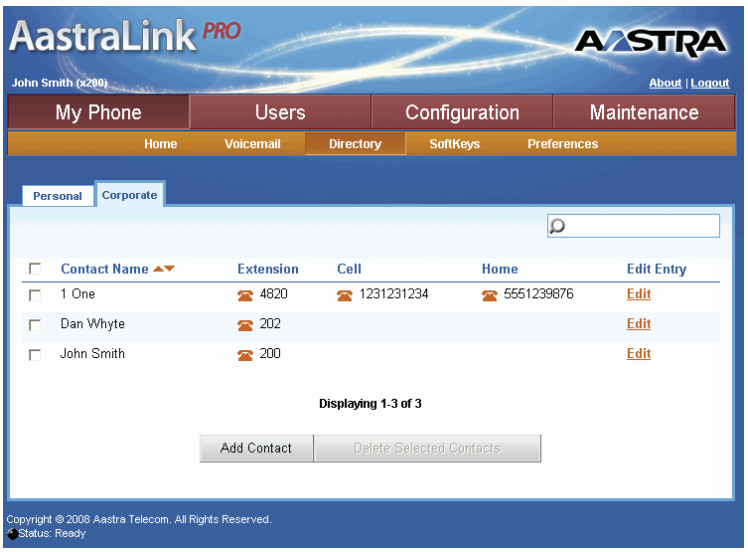
Step	Action
	When you enable the private extension feature for a User or Administrator, "**(private)**" displays in the User List page in the "**Account Type**" column.

"**(Private)**" displays for the applicable extension in the User List



In the above example, extension 201 is enabled as "private extension" and does not display in the Corporate directory as shown below. The Corporate Directory is located at ***My Phone->Directory->Corporate***.

Extension 201 does not display in the Corporate Directory



Downloaded from www.Manualslib.com manuals search engine

Uploading User Lists

The AastraLink Pro allows you to upload user lists from a file stored on a server. This allows you to create several users at once by uploading a .CSV file. The format of the file needs to be:

Extension, FirstName, Last Name. Password, MAC, Phone Type

Each item in the file must be separated by a comma.

Each MAC address must be in colon-separated format (for example, 54:43:4F:6E:11:B3).

Applicable phone types include:

- Aastra6730i
- Aastra6731i
- Aastra6751i
- Aastra6753i
- Aastra6755i
- Aastra6757i
- Aastra6757i CT
- Aastra9143i
- Aastra9480i
- Aastra9480i CT
- Aastra420d

The following is an example of a .CSV file that you can upload to the AastraLink Pro 160:

```
200,James,Test,12345,00:08:5D:03:CF:60,Aastra9480i
201,James,MBU1,12345,02:08:7B:01:03:D5,Aastra420d
```

Note: The AastraLink Pro does not support secondary (non-Aastra) IP Phones as phone types when uploading User Lists.

Downloaded from www.Manualslib.com manuals search engine

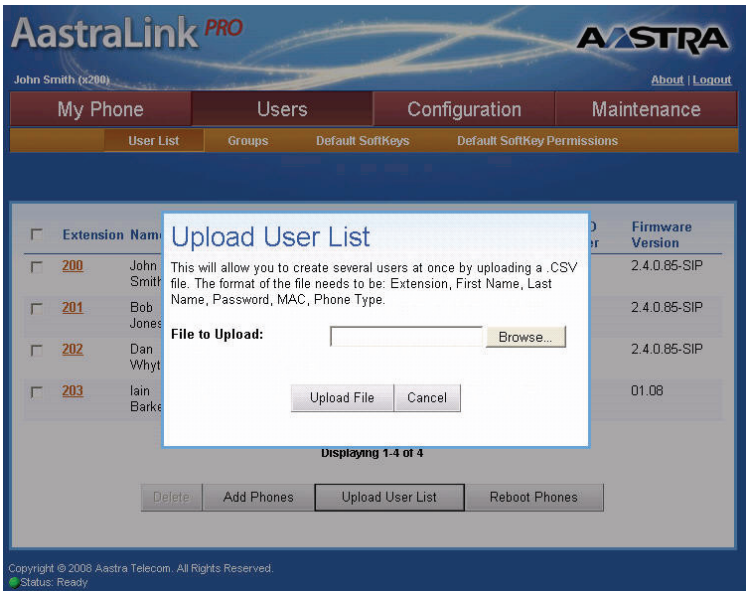
Use the following procedure to upload a user list to the AastraLink Pro.

AastraLink Web UI

Step	Action
1	Select **Users->User List.**

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
2	Click <**Upload User List**>. The following prompt displays. 
3	Enter the name of the ".csv" file that contains the User List information, or click <**Browse**> to navigate to the location where the ".csv" file is stored. **Note:** The file must be in the format: Extension, First Name, Last Name, Password, MAC, Phone Type.
4	Click **<Upload File>** to upload the User List information to the AastraLink Pro.

Downloaded from www.Manualslib.com manuals search engine

Uploading User Lists if MBU 400s Connected to the AastraLink Pro

If you have an MBU 400 connected to the AastraLink Pro, the 420d handsets are DECT devices, and therefore, do not have real MAC addresses. The AastraLink displays the MAC addresses for 420d handsets as follows:

02:08:7B:XX:YY:ZZ

where

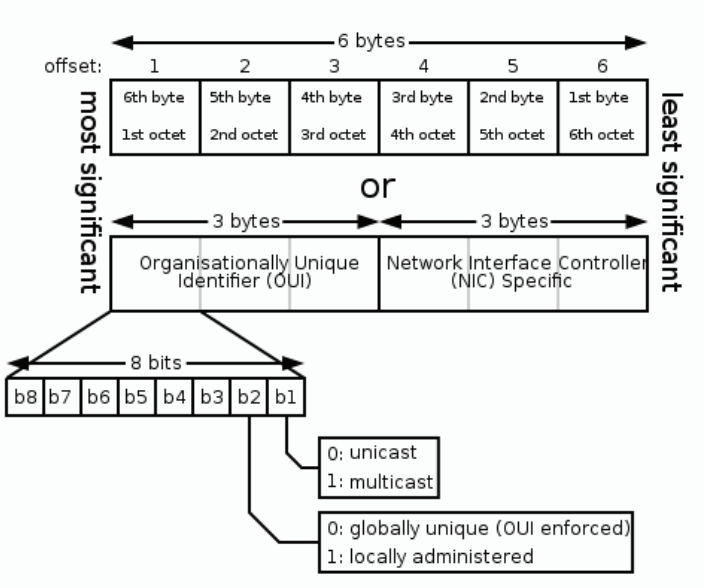
02 - is used for the first octet to indicate that the MAC address is locally administered*

XX - becomes the hex representation of the MBU that the handset is registered to

YY - becomes the hex representation of the handset ID

ZZ - is the real value (final octet of the owning MBU)

***Note**: A Locally Administered address is an IEEE 802.3 EUI-64 MAC which has the second least-significant bit of the most significant byte set to 1. For this purpose, 02 is used in the MBU/420d virtual MAC address, to ensure that it never conflicts with a real Universally Administered Ethernet MAC address (i.e. another manufacturer etc). See the following illustration for more detail.



Downloaded from www.Manualslib.com manuals search engine

Configuring Groups

Ring Groups and Paging Groups

The AastraLink Pro allows you to configure the following group types:

- **Ring Group** - All members that belong to a specific Ring Group can receive the same incoming calls.
- **Paging Group** - All members that belong to a specific Paging Group can receive the same incoming page.

AastraLink Pro supports the ability for the Administrator to choose a subset of IP phone extensions or FXS extension which operate together as a group. Groups may be associated with unique configuration for incoming call routing, and have their own voicemail and 'virtual extension' number, which is entirely separate from the extension number of the users IP phone.

Each IP phone may be a member of zero or more groups, and can overlap between multiple separate groups - for example, groups may have different membership lists, with or without any users common between two specific groups. The only provisioning restriction is that each group must have at least one IP phone as a member at all times.You can use your keypad on the phone to dial a specific group.

For Paging Groups, a single phone can be a member of up to 4 paging groups only, plus a system-wide “all active phones” group (660).

The following applies to the multiple paging group feature:

- Supports up to 9 paging groups total per AastraLink.
- Phones currently in a call have no barge-in (system-wide option)
- Intercom warning tone on/off for paging groups (system-wide option)
- Icom key can be used as a Paging key (system-wide option).
- Softkey can be used as a Paging key (per-user option)
- The Phone UI displays an Intercom/Paging screen if the phone has been configured for a Paging Group.

Downloaded from www.Manualslib.com manuals search engine

Notes:

1. By default, incoming intercom calls are enabled for all IP phone models. If required, an Administrator can enable outgoing intercom calls on all model phones (except 51i).
2. The Icom hard key is applicable to the 480i and 480i CT only; all other model phones (except 51i) can be configured with an Icom softkey.
3. Remote office phones cannot receive paging calls.

- Paging group security - An optional Password allows the administrator to establish an access PIN code that users are required to enter before sending a call to a Paging group.

  The default 660 all-phones have a permanently enabled password. This group is the VoIP equivalent of the Overhead Paging port, (see Chapter 4, “Configuring Overhead Paging” on page 4-49) and shares the password configured for that feature.

Note: If the incoming "Barge-in" setting is disabled, or the incoming "Auto-Answer" is disabled on the phone, the page does not go to the speakerphone.

Dial Plan for Ring Groups

AastraLink Pro 160 dialplan provides access to Ring Groups using the "65" prefix.

When configuring Ring Groups using the WebUI, AastraLink automatically prepends the “65” digits to the groups’s extension, to create a virtual extension number. For example, creating a Ring Group 300 will automatically prefix 65 so that the dial plan entry becomes 65300.

For more information about dial plans and for a table of dial plan numbers, see Chapter 4, Table 4-1 “AastraLink Pro 160 Dialplan” on page 4-40).

Note: All phones, including DECT handsets (420d) and FXS phones are supported for Ring Groups.

Downloaded from www.Manualslib.com manuals search engine

Ring group call-forwarding rules

For ring groups, the AastraLink Pro call-routing provides single-level forwarding with fall-back routing.

If an incoming call route is set to a ring group, calls are first directed to the ring-group. If no member of the group answers, after the configured 'Rings before Transfer' time has elapsed, the call falls-back to the alternative route specified in the "Transfer to" parameter.

Call forwarding is not performed across multiple hops; therefore calls do not take the route specified in the destination of individual members of the facility. Similarly, calls to a ring group cannot be transferred to another ring group; only direct-dial extensions can receive call transfers from a ring group.

For example:

IF	THEN
• Extension 200 is listed as a member of group 651.	• Incoming calls will route to group 651, and extension 200 will ring.
• Extension 200 has call-forward set to extension 201 AND extension 200 is a member of group 651.	• The call-forward of 200 to 201 is not used as that is a local setting for the users phone, not the ring group.
• Extension 200 has call-forward set to extension 201 AND neither extension is a member of group 651.	• Direct-dial calls to 200 will call-forward to 201.
• “Transfer to” for group 651 is configured as auto-attendant.	• Incoming calls to group 651 are set to route to the Auto-attendant if there is no answer from any Ring Group member.

Downloaded from www.Manualslib.com manuals search engine

Dial Plan for Paging Groups

AastraLink Pro 160 dialplan provides access to Paging Groups using the "66" prefix.

When configuring Paging Groups using the WebUI, AastraLink automatically prepends the "66" digits to the groups's extension, to create a virtual extension number. For example, creating a Paging Group 111 will automatically prefix 66 so that the dial plan entry becomes 66111.

For more information about dial plans and for a table of dial plan numbers, see Chapter 4, Table 4-1 "AastraLink Pro 160 Dialplan" on page 4-40

Note: DECT handsets (420d) and FXS phones are not supported for Paging Groups.

Downloaded from www.Manualslib.com manuals search engine

Virtual Extension Numbers (for Ring and Paging Groups)

Groups use virtual extension numbers which may have any length of numeric digits from 1 to 20. Although most customers may choose to use 1 or 2 digit numbers for group virtual extensions to keep their dial plan reasonable for callers, longer digit strings can be useful for 'name dialling'. To dial a Group's virtual extension, it is necessary to dial the 65 (Ring Group) or 66 (Paging Group) before the virtual extension number.

For example, if a Ring Group's virtual extension is 10, the group can be reached by dialling 6510 from a SIP phone, the IVR, etc. An example for a name dialling could be '65+PIZZA' with the corresponding virtual extension of 'PIZZA' being 74992.

In the illustration below, a Ring Group and Paging Group were created.

For more information about the AastraLink Pro 160 dial plans, see Chapter 4, the section, "Configuring Dial Plan Settings" on page 4-38.

Downloaded from www.Manualslib.com manuals search engine

Creating Rules for Groups (Ring and Paging Groups)

When you create a Group, you configure group-forwarding rules for the Group that determines what happens when an incoming call goes unanswered. The following table describes the parameters you can set to configure these group-forwarding rules.

Parameter	Description
Name	Specifies the name of the Group. Valid values are: • Ring Group • Paging Group
Extension	Specifies the extension for the Group. **Note:** For more information about assigning extension numbers, see the section, "Virtual Extension Numbers (for Ring and Paging Groups)" on page 42.
Password	(optional) Specifies the PIN access to a Paging Group, or the password for voicemail on a Ring Group.
Voicemail Notification (Not applicable to Paging Groups)	Specifies whether or not an email is sent to the Ring Group to notify of a voicemail that was left by the incoming caller. Valid values are: • Off (default) • Email • Email with Audio-Attachment **Note:** Ring groups do not have individual email addresses. When email is configured as the notification method, the message is sent to the email addresses in the "***My Preferences***" of all members of that ring group (if configured).

Downloaded from www.Manualslib.com manuals search engine

Parameter	Description
Distinctive Ring (Not applicable to Paging Groups)	Specifies a distinctive ring for all of the member's phones in the Ring Group. Valid values are: • None (default - Tone 1) • Pattern 1 (Tone 2) • Pattern 2 (Tone 3) • Pattern 3 (Tone 4) • Pattern 4 (Tone 5) **Note:** Distinctive ring tones apply to SIP extensions only. Any 420d or SIP phones in a Ring Group receive standard ring tone. For more information about ring tone patterns, see the section, "Distinctive Ringing (Ring Groups only)" on page 3-45.
Rings Before Transfer (Not applicable to Paging Groups)	Specifies the number of rings on the Ring Group's phones before transferring the incoming call. Valid values are 1 through 6. Default is 1. **Note:** Transfer of the call is based on the setting of the "Transfer to" parameter.
Transfer to (Not applicable to Paging Groups)	Specifies where the incoming call is transferred to if there is no answer or if there is a busy signal on the Ring Group's phones. Valid values are: • None (default) • Extension • Voicemail • Auto-Attendant **Note:** If you choose extension, you must specify the extension at the "Transfer Number" parameter.
Transfer Number (Not applicable to Paging Groups)	Specifies the phone number or extension to transfer unanswered incoming calls to. Valid values are the registered phones with their extensions in your AastraLink Pro 160 network.
Group Membership	Specifies the members of the Ring Group or Paging Group with their extensions. Only the members selected become part of the Ring Group or Paging Group you define. Default is NO MEMBERS.

Downloaded from www.Manualslib.com manuals search engine

Distinctive Ringing (Ring Groups only)

In IP Telephony, different ringing patterns have different frequencies and cadences. Ring cadence is the ringing pattern heard by the called party, before they pick up the call. The IP phones use the following Bellcore-specified tones by default:

Ring Tone Pattern

Call Criteria	Bellcore Tones
internal calls	Bellcore-dr2
external calls	Bellcore-dr3
calls with contact list	Bellcore-dr4
calls with specific time frames	Bellcore-dr5

Note: Distinctive ring tones apply to SIP extensions only. Any 420d or SIP phones in a Ring Group receive standard ring tone.

Downloaded from www.Manualslib.com manuals search engine

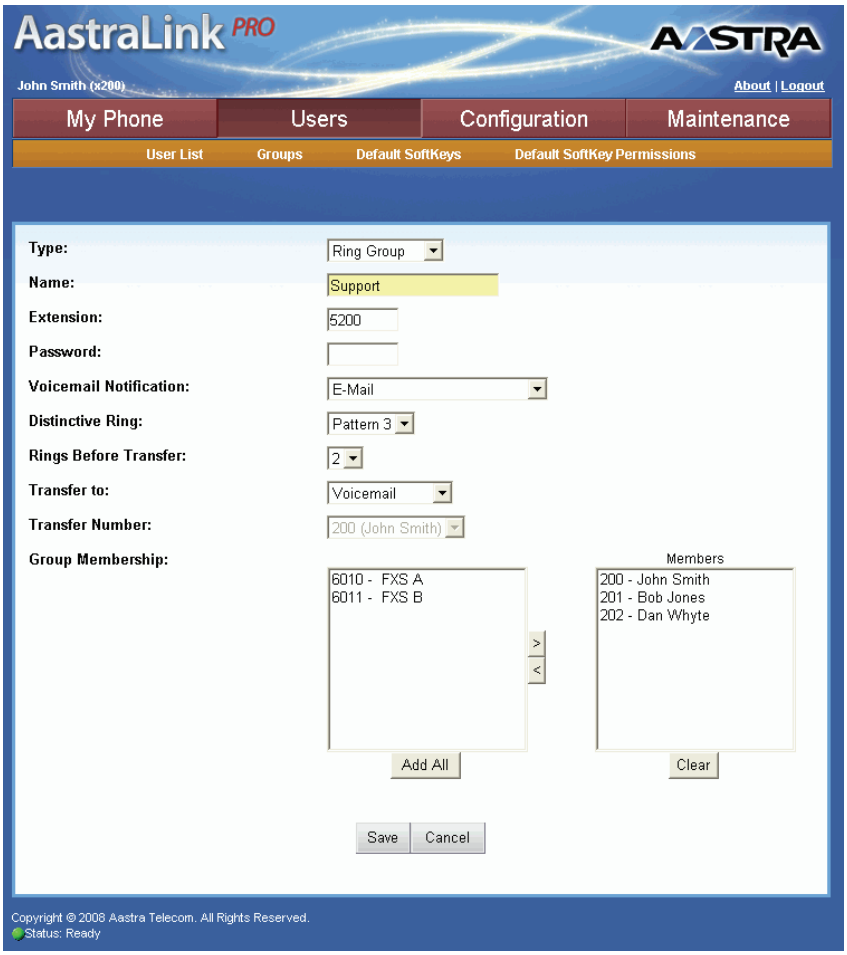
The following table identifies the different Bellcore ring tone patterns and cadences.

Bellcore Tone	Pattern ID	Pattern	Cadence	Minimum Duration (ms)	Nominal Duration (ms)	Maximum Duration (ms)
(Standard)	1	Ringing Silent	2s On 4s Off	1800 3600	2000 4000	2200 4400
Bellcore-dr2	2	Ringing Silent Ringing Silent	Long Long Long	630 315 630 3475	800 400 800 4000	1025 525 1025 4400
Bellcore-dr3	3	Ringing Silent Ringing Silent Ringing Silent	Short Short Long	315 145 315 145 630 2975	400 200 400 200 800 4000	525 525 525 525 1025 4400
Bellcore-dr4	4	Ringing Silent Ringing Silent Ringing Silent	Short Long Short	200 145 800 145 200 2975	300 200 1000 200 300 4000	525 525 1100 525 525 4400
Bellcore-dr5	5	Ringing		450	500	550

Downloaded from www.Manualslib.com manuals search engine

Example of a Ring Group

The following illustration shows an example of a configured Ring Group.



In the illustration above, a Ring Group named "**Support**" is defined with three members:

Extension **200, John Smith**
Extension **201, Bob Jones**
Extension **202, Dan Whyte**

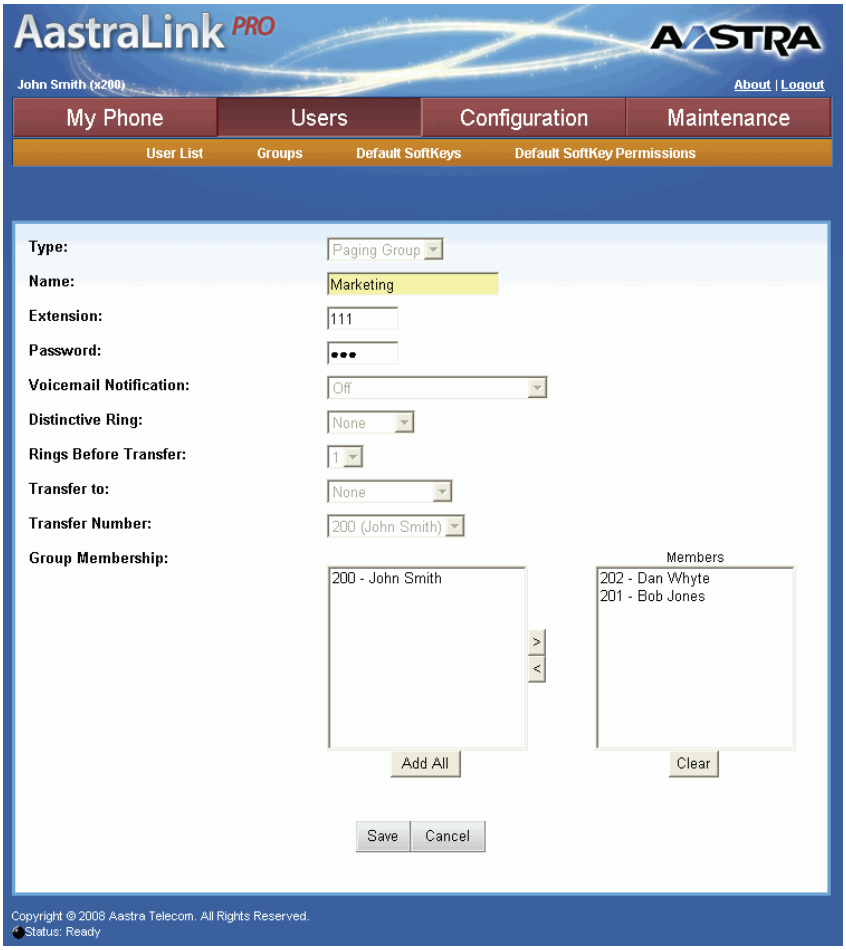
The Ring Group's "Extension" is **5200**; "Voicemail Notification" is set for **Email**; "Distinctive Ring" is set for **Pattern 3**; "Ring Before Transfer" is set to **2**; and "Transfer to" is set to **Voicemail**.

Downloaded from www.Manualslib.com manuals search engine

So in the above configuration, when a call comes into the Support Ring Group at extension 5200, the phones at extension 200, 201, and 202 ring for at least 2 rings with a specific ring pattern identified for Support. If the incoming call is not answered within 2 rings, the call is transferred to voicemail so the caller can leave a message. An email notification of the voicemail is also sent to all three members email addresses (defined at the location *My Phone->Preferences*).

Example of a Paging Group

The following illustration shows an example of a configured Paging Group.



Downloaded from www.Manualslib.com manuals search engine

In the illustration above, a Paging Group named "**Marketing**" is defined with two members:

Extension **201, Bob Jones**
Extension **202, Dan Whyte**

The Paging Group's "Extension" is **111**. A password is also configured for the Paging Group. So in order for the members of the group to answer a page on their phone, they must enter the password pin number using their phone's keypad.

Adding a Group

Use the following procedure to add a new Group.

AastraLink Web UI

Step	Action
For Ring Groups and Paging Groups	
1	Select **Users->Groups**
2	Click **<Add Group>**
3	In the "**Type**" field, select the type of group you want to add. Groups types are: • Ring Group • Paging Group
4	Specify a name for the group in the **"Name"** field. For example: **Sales**
5	Specify a group extension for the group in the **"Extension"** field. Valid values are from 1 to 20 alphanumeric characters. For example: **300** or **74992** **Note:** For more information about assigning extension numbers, see the section, "Virtual Extension Numbers (for Ring and Paging Groups)" on page 42.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
6	(optional) Specify a password for the group in the **"Password"** field.
For Ring Groups only	
7	Select the method you want to use to be notified that a voicemail has been recorded for the user group, in the **"Voicemail Notification"** field. Valid values are: • **Off** (default - disables voicemail notification) • **Email** • **Email with Audio Attachment** **Note:** Since Ring Groups use virtual extensions, these extensions do not have an email address. If the "Voicemail Notification" parameter is enabled, voicemail notifications are sent to the individual email address for each member of the Ring Group (configured at the location *My Phone->Preferences*).
8	Select the distinctive ring pattern you want to apply to this Ring Group, in the **"Distinctive Ring**" field. Valid values are: • **None** (default - Tone 1) • **Pattern 1** (Tone 2) • **Pattern 2** (Tone 3) • **Pattern 3** (Tone 4) • **Pattern 4** (Tone 5) **Note:** For more information about ring tone patterns, see the section, "Distinctive Ringing (Ring Groups only)" on page 3-45.
9	Set the number of times the phone rings before being transferred in the **"Rings Before Transfer"** field.
10	Specify the destination where incoming calls should be transferred in the **"Transfer To"** field. Valid values are: • **None** (default) • **Extension** • **Voicemail** • **Auto-Attendant**

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
11	If you set the **"Transfer To"** field to **Extension**, then specify the extension to which incoming calls should be transferred in the **"Transfer Number"** field. For example: **200 (John Smith).**
For Ring Groups and Paging Groups	
12	In the "**Group Membership**" field, do one of the following actions: • To add individual users to the group, click on the user name, then click > to move the user from the **Available** list to the **Members** list. • To add multiple users to the group, press and hold the **<Ctrl>** key, select the users, then click > to move the user from the **Available** list to the **Members** list. • To add all users to the group, click <**Add All>.**
13	Click **<Save>** to save your changes.

Configuring Additional Features for a Paging Group

If you've added a Paging Group to the AastraLink Pro, you can enable/disable the following Paging and Intercom dial plan options via the Web UI at the location ***Configuration->Dial Plan->Settings***:

- Allow Barge In
- Play Warning Tone
- Microphone Mute
- Auto-Answer
- Paging Mode for Icom Key

For more information about setting these parameters, see Chapter 4, the section, "Configuring Paging and Intercom Options" on page 4-50.

Downloaded from www.Manualslib.com manuals search engine

Editing a Group

Use the following procedure to edit a Group that you have previously configured.

AastraLink Web UI

Step	Action
1	Select **Users->Groups**
2	Click on the extension for the Group (Ring Group or Paging Group) that you want to edit.
3	Edit the Group parameters as necessary. To add or delete user group members, do one of the following actions: • To add individual users to the group, click on the user name, then click > to move the user from the **Available** list to the **Members** list. • To delete individual users from the group, click on the user name, then click < to remove the user from the **Members** list. • To add all users to the group, click **Add All**
4	Click **<Save>** to save your changes

Downloaded from www.Manualslib.com manuals search engine

Deleting a Group

Use the following procedure to delete a Group.

AastraLink Web UI

Step	Action
1	Select **Users->Groups**
2	Click on the checkbox(s) for the group (Ring Group or Paging Group) that you want to delete.
3	Click **<Delete Selected Groups>**
4	When prompted, click **<Yes>** to confirm your action. The group you deleted no longer appears on the group list.

Reference

For information about using the the XML Paging feature on the phone, see your ***AastraLink Pro 160 Users Guide.***

Downloaded from www.Manualslib.com manuals search engine

Default Softkeys (Users Menu)

You configure softkey default settings from the **Users->Default Softkeys** menu.

Figure 3-5. Default Softkeys Menu

Downloaded from www.Manualslib.com manuals search engine

Using the Default Softkeys Menu (User Phone)

Softkeys function exactly like the hard keys on your phone, except they are programmable. When you press a softkey on your IP phone, an action takes place. For example, when you press the DND softkey, you enable Do Not Disturb on your phone.

As administrator, you have the option to change the default softkey settings for configurable softkeys for each User's phone. (those that have been assigned a softkey type, or are empty). You can also determine which softkeys appear in the softkey list and available to the User. That is, you can use the AastraLink Web UI to:

- Add new softkeys
- Delete softkeys
- Edit a softkey so it performs a different function (for example, change a Park Call softkey to a Speeddial softkey).
- Customize a User's softkey option list

Default softkey accounts that the administrator defines are applied only to the model phone you are configuring.

The Default Softkeys menu lists all Aastra phone's models that may be connected to your AastraLink network, and the default softkeys currently configured for each phone model. If you click on the tab for a specific phone, the menu changes to show the current softkey configuration for that model phone.

For some model phones, certain softkeys are reserved and cannot be edited. For example, on the Aastra IP Phone Model 9143i, the first four softkeys are pre-programmed as follows: *Options*, *Directory, Save*, *Delete*. These softkeys cannot be edited or deleted by the administrator, or by the user.

Default softkey accounts that the administrator defines are applied to any new Aastra IP phones of that particular model that you add to your network. That is, when you initially start up and register an IP phone with the AastraLink Pro 160, the default softkeys you specify from this menu are programmed automatically on the IP phone. Later, users have the option to change the default settings, add additional softkeys or delete softkeys from their own IP phones.

Downloaded from www.Manualslib.com manuals search engine

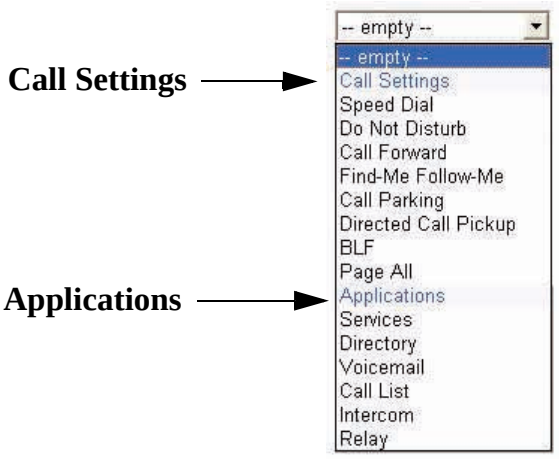
Note: If a user has defined a custom softkey list for an IP phone, then the custom softkey list is maintained. Any changes made by the administrator to default softkey settings do not apply to the User's IP phone.

Softkey Types (User Phone)

Depending on the phone model you are configuring, there are several different types of softkeys available for you to configure for the IP phones on your network. Each softkey type performs a different function.

On the AastraLink Web UI, you can configure softkeys for the administrator phone and the user phones. Softkeys are organized by type into the following categories:

- **Call Settings Softkeys** - used to specify how inbound/outbound calls are handled. For example, Do Not Disturb, or Call Forwarding.
- **Applications Softkeys** - used to access applications (Voicemail) or phone menus (the Service menu).



Downloaded from www.Manualslib.com manuals search engine

Depending on the model IP phone you are using, certain softkey types are not available. For example, the Transfer and Conference softkeys are only applicable to phone models that do not have dedicated hard keys for those functions.

The following tables describe each type of softkey available, and provide more information about using the softkey.

Call Settings Softkeys (User Phone)

The table below describes the call settings softkeys you can configure for the Aastra IP phones on your AastraLink network. The table describes each softkey type, function, label, and value (where applicable).

Softkey Type	Function	Label	Value
Speed Dial	Allows you to dial a phone number/ extension using a softkey.	The name of the person you want to speeddial. For example: Dan Jones	The phone number or ext to speeddial. For example: 285
Do Not Disturb	Stops your IP phone from ringing when an incoming call is received.	n/a	n/a
Call Forward	Allows you to forward incoming calls to another destination.	n/a	n/a
Find Me, Follow Me	Allows you to specify other phone numbers that should be used to try to reach you. For example, your work phone number and your cell phone number.	n/a	n/a
Park Call	Allows you to “park” a call in order to retrieve it later, from another IP phone. See the *AastraLink IP Phone User’s Guide* for more information about using the Park Call feature.	n/a	n/a

Downloaded from www.Manualslib.com manuals search engine

Softkey Type	Function	Label	Value
Directed Call Pickup	Allows you to intercept - or pickup - a call on a monitored extension. When you press the DCP softkey, your IP phone displays a list of currently ringing numbers. You select the call you want to “pickup“ (intercept) from this list and are connected to the call. Refer to the *AastraLink IP Phone User’s Guide* for instructions on how to intercept calls using the Directed Call Pickup feature.	n/a	n/a
BLF	Busy Lamp Field. Allows you to monitor a specific extension for state changes (busy, idle and ringing). When you configure a BLF softkey, an indicator (either an icon or a LED) displays on your IP phone next to the softkey. The icon shows whether the extension you are monitoring is “busy” (on the phone) or “idle.” Refer to the *AastraLink IP Phone User’s Guide* for instructions on how to monitor calls using BLF softkeys. **Note:** It is not recommended to use BLF in the default softkey accounts, since BLF is applied to all users of the selected phone model. BLF imposes realtime overhead on the AastraLink call processing which may degrade overall system performance if applied too gratuitously.	The name of the person whose extension you are monitoring For example: Joe Smith	The phone number or extension to monitor. For example: 255

Downloaded from www.Manualslib.com manuals search engine

Softkey Type	Function	Label	Value
Page All	Indicates the key is configured as a Paging key. Pressing this key initiates an immediate multicast RTP stream to the pre-configured multicast group address provisioned by the AastraLink Pro 160.	n/a	n/a
Transfer	Allows you to transfer a call to another extension. **Note:** Consultative transfer and blind transfer are supported for calls to SIP extensions; consultative transfer is supported for calls to ring groups.	n/a	n/a
Conference	Allows you to set up a conference call between two or more active calls.	n/a	n/a
Intercom	Allows you to connect with a remote extension using the intercom.	n/a	n/a

Downloaded from www.Manualslib.com manuals search engine

Application Softkeys (User Phone)

The following table describes the application softkeys you can configure for the Aastra IP phones on your AastraLink network.

Softkey Type	Function
Services	Displays the Services list. From the Services list, you can access these other services and applications: • Voicemail • Directory • Recent Calls List • Call Settings • Relay • Pickup Call • Park Call
Directory	Displays the Directory list. From the Directory list, you can: • Access your Personal directory • Access the Corporate directory • Search for a contact in either directory
Voicemail	Allows you to connect to Visual Voicemail. When you press the Vmail softkey, the Visual Voicemail menu appears on your Phone UI. After you login to your voicemail account, you can view details about your voicemail messages on your phone UI, play messages, store/forward/save/delete messages, or manage your voicemail preferences from this menu. To configure voicemail rules for your IP phone, see “Configuring Visual Voicemail Settings” on page 4-15.

Downloaded from www.Manualslib.com manuals search engine

Softkey Type	Function
Call List	Allows you to access the Recent Calls list.
Relay	Allows an operator/user to monitor an external device (such as a locked entrance door), and use a softkey to change the status of the device (unlock the door) when an alarm is triggered. To configure a Relay for your IP phone, see "Configuring Push Button Trigger Input or Relay Output" on page 4-12

Note: When you add or delete a softkey, the changes to your IP phone are usually dynamic. However, some softkey types (BLF, for example) require you to restart the phone in order for the changes to take affect.

Adding a Default Softkey (User Phone)

Use the following procedure to add/define a new default softkey for the Aastra IP phones in your network.

AastraLink Web UI

Step	Action
1	Select **Users->Default SoftKeys**
2	Click on the tab for the model Aastra IP phones you are configuring.
3	Click on an **<empty>** softkey.
4	Select the **"Softkey Type"** from the pull-down menu, then click **<Save>** **Note:** If you are configuring a Speeddial or BLF softkey, you must also assign a label/value to the softkey. See "Softkey Types (User Phone)" on page 3-56 for more information.

Downloaded from www.Manualslib.com manuals search engine

Editing a Default Softkey (User Phone)

Use the following procedure to edit an existing default softkey for the Aastra IP phones in your network.

AastraLink Web UI

Step	Action
1	Select **Users->Default Softkeys**
2	Click on the tab for the model Aastra IP phones you are configuring.
3	Click on the softkey you want to edit.
4	Select a different **"Softkey Type"** from the pull-down menu.
5	Click **<Save>** to save your changes. The Default Softkeys menu updates to reflect your changes.

Deleting a Default Softkey (User Phone)

Use the following procedure to delete a default softkey from the Aastra IP phones on network.

AastraLink Web UI

Step	Action
1	Select **Users->Default SoftKeys**
2	Click on the tab for the model Aastra IP phones you are configuring.
3	Click on the softkey you want to delete.
4	Click **<Delete>** The softkey is removed from the Default Softkeys list and is reset to **<empty>**.

Downloaded from www.Manualslib.com manuals search engine

Default Softkey Permissions (User Phone)

An Administrator can specify the default key types that are available to a User or Administrator to select from when that User is configuring keys on their phone. When an Administrator specifies these default softkey permissions, only the default softkeys enabled on the **Default Softkey Permission** page will display on the User's phone for the user to select from when configuring softkeys.

Use the following procedure to set default softkey permissions for a User's phone.

AastraLink Web UI

Step	Action
1	Select **Users->Default Softkey Permissions.**
2	The default softkeys on a User's phone display in this **Default Softkey Permissions** page. All softkeys are enabled by default. To disable a softkey, click on a box to uncheck it. **Note:** Available default softkeys are dependant on the Model of the User's phone. If you disable a default softkey, that softkey does not display in the User's default softkey list.
3	Click <**Save**> to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Default Softkeys for Expansion Modules (Administrator or User Phone)

You add, edit, and delete default softkeys for an expansion module attached to your IP phone the same way you do for the default keys on the IP phone. See "Adding a Default Softkey (User Phone)" on page 3-61, "Editing a Default Softkey (User Phone)" on page 3-62, and "Deleting a Default Softkey (User Phone)" on page 3-62.

In addition, you can use the Web UI to download the corporate directory and quickly configure speeddial softkeys on the module, as described in the following procedure.

AastraLink Web UI

Step	Action
1	Select **Users->Default Softkeys-> Expansion Module 1.** **Note:** The AastraLink Pro 160 supports only one expansion module per phone.
2	Click **Corporate Directory.** The AastraLink begins to download and configure the expansion module with the corporate directory contacts. When the process complete, a message appears confirming that the download is complete. If you view the expansion module UI, you will see speed dials configured for each person listed in the corporate directory.

Downloaded from www.Manualslib.com manuals search engine

Restoring Default Softkeys Back to Factory Settings

Use the following procedure to set the default softkeys back to their original, factory default settings.

AastraLink Web UI

Step	Action
1	Select **Users->Default SoftKeys**
2	Select which model Aastra IP phones you are configuring from the **"Phone Type"** pull-down menu.
3	Click **<Reset to Defaults>** The original, default softkey settings are restored.

Downloaded from www.Manualslib.com manuals search engine

Downloaded from www.Manualslib.com manuals search engine

Chapter 4
Configuring AastraLink Pro 160 System and Network Parameters

About this Chapter

Introduction

This chapter describes how to configure AastraLink Pro 160 system and network management parameters. These parameters apply to the AastraLink device itself.

For a procedure on setting up your AastraLink Pro 160 manually, see Appendix

Topics

This chapter covers the following topics:

Topic	Page
Accessing the Configuration Menu	page 4-3
Configuring System Settings	page 4-4
Specifying Regional Settings	page 4-6
Specifying the Date and Time	page 4-10
Configuring the Music On Hold Option	page 4-11
Configuring Push Button Trigger Input or Relay Output	page 4-12
Configuring Visual Voicemail Settings	page 4-15
Configuring FXO Tuning Settings	page 4-17
Configuring Network Settings	page 4-21
Editing Local Network Settings	page 4-22

Downloaded from www.Manualslib.com manuals search engine

Topic	Page
Editing Local Service Settings	page 4-26
Editing External Services Settings	page 4-34
Configuring Dial Plan Settings	page 4-38
Local Dial Plan	page 4-40
Star Codes	page 4-41
Specifying Dial Plan Settings	page 4-41
Configuring a Dial Plan for Auto-Fax	page 4-45
Configuring Overhead Paging	page 4-49
Configuring Paging and Intercom Options	page 4-50
Dial Plan for Meet-Me Conference Bridges	page 4-53
Configuring an Emergency Dial Plan	page 4-54
Configuring Barred Numbers	page 4-55
Configuring FXO Lines	page 4-57
Configuring FXO Lines for Shared Line Appearance (SLA)	page 4-60
Configuring Abbreviations	page 4-67
Configuring VoIP Settings	page 4-74
SIP Trunking	page 4-76
SIP Direct Inward Dialing (DID)	page 4-86
AastraLink Trunking	page 4-89
Mobility Base Units (MBUs)	page 4-97
Configuring Auto-Attendant	page 4-112
How Auto-Attendant Works	page 4-113
Settings for the Auto-Attendant	page 4-115
Custom Interactive Voice Response (IVR)	page 4-121
Schedule for the Auto-Attendant	page 4-126
Holidays for the Auto-Attendant	page 4-130
Custom Recordings	page 4-134

Downloaded from www.Manualslib.com manuals search engine

Accessing the Configuration Menu

You configure all system and network parameters for the AastraLink Pro 160 from the **Configuration** menu, shown below.

Figure 4-1. AastraLink Web UI Configuration Menu

Downloaded from www.Manualslib.com manuals search engine

Configuring System Settings

You configure AastraLink Pro 160 system settings from the ***Configuration->System Settings*** menu. System settings include the following tabs:

- **Regional Settings*** - Allows you to set the geographical location, time zone, date and time format, and language on the AastraLink Pro. This page also allows you to set the language that the caller hears when calling into the auto-attendant.
- **Set Time and Date** - Allows you to set the time and date manually on the AastraLink Pro.
- **Music on Hold** - Allows you to set the source for music-on-hold (audio file, line-in, or default file on the AastraLink Pro. This page also allows you to upload a file to use for music-on-hold.
- **Relay/Push Button** - Allows you to configure the settings on the AastraLink Pro if you are using a relay/push button in your facility. The default relay extension is 6100. You can set relay delay, push button alert text, use the default announcement, or record or upload a new announcement, send a message to the phone, or send a message to email.
- **Voicemail** - Allows you to set the maximum duration allowed for a voicemail message, and also allows you to set the maximum messages allowed to be stored.
- **FXO Tuning** - Allows you to run the FXO Automatic Tuning Wizard with the push of a button.

Note: *The Regional Settings option is intrinsically linked to the initial greenfield system configuration.

When system greenfield setup is performed using the TUI and Administrator phone, the selection of country and timezone during that process is used to denote the "system configured" state. Setting the same values using the Adminnistrator login to the Web UI has the same effect.

Downloaded from www.Manualslib.com manuals search engine

For example, saving a valid country and timezone denotes that the system is configured, setting no country and timezone denotes the system is not configured, and the greenfield configuration via the Administrator TUI is re-enabled for the next phone to register.

This feature is intended for the use of resellers for the pre-configuration staging of an AastraLink system prior to shipping to end-customer site. Please contact Aastra Customer Support for additional information regarding the specific use of this pre-configuration administrator login facility.

Each of the above features are described in the following paragraphs.

Downloaded from www.Manualslib.com manuals search engine

Specifying Regional Settings

Use the following procedure to specify regional settings for your AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->System Settings->Regional Settings.**
2	Set **<Location>** to the country where you installed the AastraLink Pro 160. Default is **None**. Valid values are: • **None** (default) • **Canada** • **United States** • **Mexico** Notes: **1.** The use of "**None**" is not supported. A valid country must be set during initial greenfield configuration. **2.** If you change the country setting for this parameter, the FXO Auto-Tuning feature must be initiated to reset the auto-tuning on the FXO ports to the new country.

Downloaded from www.Manualslib.com manuals search engine

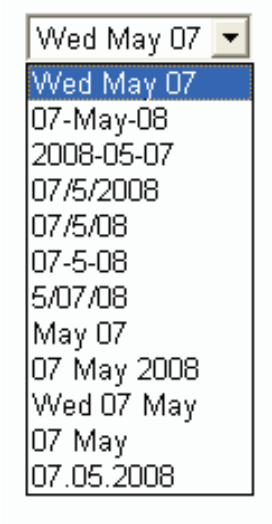
AastraLink Web UI

Step	Action
3	The "**Time Zone**" field is disabled by default, until you select a country in Step 2. Select a **Time Zone** that maps to your location. Default is "Select a country". Valid values are:

(GMT -4:00) - New York
(GMT -4:00) - New York
(GMT -4:00) - Detroit
(GMT -4:00) - Louisville, Kentucky
(GMT -4:00) - Monticello, Kentucky
(GMT -4:00) - Indianapolis, Indiana
(GMT -4:00) - Marengo, Indiana
(GMT -5:00) - Knox, Indiana
(GMT -4:00) - Vevay, Indiana
(GMT -5:00) - Chicago
(GMT -5:00) - Vincennes, Indiana
(GMT -5:00) - Petersburg, Indiana
(GMT -5:00) - Menominee
(GMT -5:00) - Center, North Dakota
(GMT -5:00) - New Salem, North Dakota
(GMT -6:00) - Denver
(GMT -6:00) - Boise
(GMT -6:00) - Shiprock
(GMT -7:00) - Phoenix
(GMT -7:00) - Los Angeles
(GMT -8:00) - Anchorage
(GMT -8:00) - Juneau
(GMT -8:00) - Yakutat
(GMT -8:00) - Nome
(GMT -9:00) - Adak
(GMT -10:00) - Honolulu

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
4	Specify the **<Date Format>** for your Aastra IP phones. Default format is <Month><Year>. Valid formats are: 
5	Specify the **<Time Format>.** Default is **12 hour.** Valid values are: • **12 hour** • **24 hour**
6	Specify the default AastraLink Pro 160 system **<Language>.** Valid values are: • **English** (default) • **French** • **Spanish** The language you specify here is the default language used for all text displayed on the IP phones, as well as the default voicemail and auto-attendant menu language for all callers.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

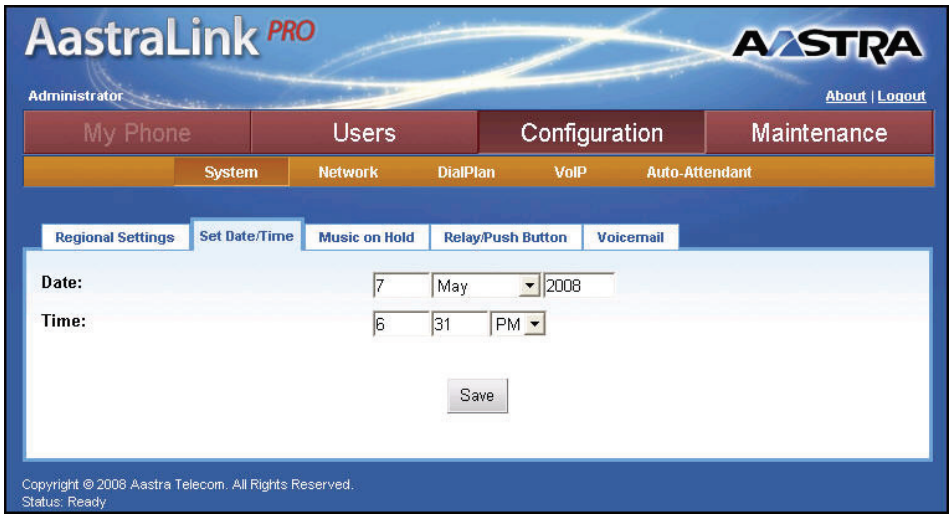
Step	Action
7	To support additional languages for auto-attendant menu, voicemail, and user Web UI/phone language preferences, click on any of the following parameters. Only the system language set by the administrator during initial greenfield configuration is enabled by default. • **Support English** • **Support French** • **Support Spanish** **Note:** Adding additional languages may require the IP phones to reboot, in order to download the new language pack.
8	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Specifying the Date and Time

If automatic time and date were enabled during the initial administrator setup of the system (default set to **yes** during initial setup), the AastraLink Pro 160 uses the Network Time Protocol (NTP) to synchronize its date and time from the Internet global time servers (pool.ntp.org). If Internet access is not available, then use the following procedure to manually set the date and time for your AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->System->Set Date/Time.** 
2	In the "**Date**" field, specify the date that the AastraLink Pro displays on the IP phones in your network.
3	In the "**Time**" field, specify the time that the AastraLink Pro displays on the IP phones in your network. Default is the current time set on the AastraLink Pro 160.
4	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Configuring the Music On Hold Option

The AastraLink provides a default audio file for the Music on Hold feature. You have the option to upload a custom audio file for Music on Hold. The audio file format must be as follows: Microsoft WAV format, 8KHz PCM, mono, 16-bit signed linear. The audio source can either be a WAV file, or a direct connection between the AastraLink Pro 160 Music on Hold stereo jack (located on the back of the device) and an audio device (CD player).

AastraLink Web UI

Step	Action
1	Select **Configuration->System->Music on Hold.**
2	In the "**Source**" field, specify the source of the Music on Hold: either an audio file, or a direct connection (line in) between the AastraLink device and an audio device. Valid values are: • **Default** (default setting) • **Line In** • **Audio File** **Note:** The current audio file (default file) is listed in the "**Current Audio File**" field. In the screen in Step 1, the audio file name is "**larencontre.wav**".

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
3	In the "**Upload New File**" field, click **<Browse>** and locate a new audio *.wav* file that you want to use for Music on Hold. Upload the file to the AastraLink Pro.
4	Click **<Save>** to save your changes.

Configuring Push Button Trigger Input or Relay Output

The AastraLink includes two optional, programmable features - Push Button Trigger Input and Relay Output - that allow you monitor and/or change the status of external devices connected to the AastraLink. Both features work in conjunction with your IP phones, as described below:

- **Push Button Trigger Input**: To enable the trigger feature, you connect an external device (for example, a motion-detector alarm system) to the input connectors on the back of the AastraLink. When triggered (for example, motion is detected in an alarmed corridor), the AastraLink can respond by sending a text message, and/or an audio message, to the IP phone that you specify.

Note: There is no default action configured for Push Button Trigger. If you wish, you can configure a custom text message, and a custom audio message, using the AastraLink Web UI. For example, you may want to send a text or audio message that says "Motion Sensors Activated" to your IP phone.

- **Relay Output:** To enable the relay feature, you connect an external device (for example, a locked entrance door) to the relay I/O port on the back of the AastraLink. You activate the relay - that is, change the status of the external device - by pressing a Relay softkey on your IP phone, or by dialing a preconfigured number. In this example, the relay unlocks the entrance door.

Downloaded from www.Manualslib.com manuals search engine

You may want to configure the Push Button Trigger feature and the Relay feature to operate with the same external device. For example, suppose you want the Operator to monitor and control a locked entrance door. In this scenario, you could connect the entrance doorbell to the Push Button Trigger, and the locked entrance door to the Relay I/O port. When the doorbell is pressed, the Aastralink sends a message to the Operator IP phone that someone is requesting entrance into the building. The Operator can then unlock the door by pressing the Relay softkey on the IP phone.

Use the following procedure to configure the Trigger or Relay features.

AastraLink Web UI

Step	Action
1	Select **Configuration->System->Relay/Push Button.**
2	In the "**Relay Delay (seconds)**" field, specify a delay time for the relay. Valid range is **1 to 99** seconds. Default is **5**.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

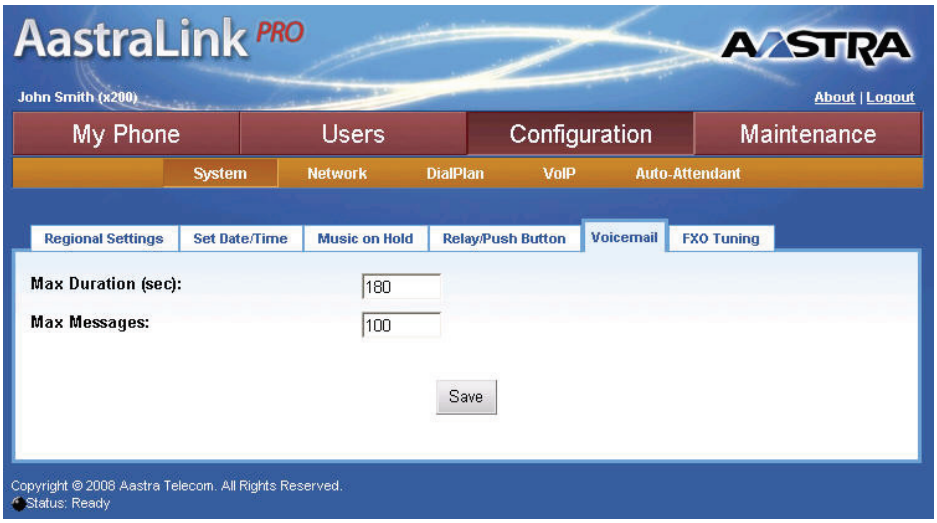
Step	Action
3	In the **"Push Button Alert Text"** field**,** specify a custom alert text message. The default text message is: "*The Push Button has been pressed*."
4	(optional) The AastraLink Pro has a default message announcement that announces after pushing the relay button. To record a custom announcement, click **<Record Custom Message>**. Your IP phone rings. Follow the instructions as prompted by your IP phone to record and save a new message.
5	(optional) You can upload a message announcement by clicking **<Browse>** to go to the location where your message announcement is stored. This file must be a "*.wav"* file. Upload the file to the AastraLink Pro.
6	Specify how you want to be notified when the trigger is activated, as follows: • To be notified on the phone TUI, click in the check box **Send Message to Phone**. • To be notified by email, click in the check box **Send Message to Email**.
7	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Configuring Visual Voicemail Settings

Use the following procedure to configure visual voicemail setting parameters.

AastraLink Web UI

Step	Action
1	Select **Configuration->System->Voicemail.** 
2	To specify a maximum length (duration, in seconds) for a voicemail message, enter a value in the "**Max Duration**" field. The default is 180 seconds maximum length for each voice message, after which the caller is disconnected automatically.
3	To specify a maximum number of voicemail messages saved by any user, enter a value in the "**Max Messages**" field. The default is 100 messages per voice mailbox, after which incoming calls are instructed that the mailbox is full and no message can be left.
4	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Note: There is a system-wide limit for voicemail storage on the CompactFlash (CF) card. The limit is calculated by measuring the current free space of the CF card, subtracting 100MB required for working space by system upgrade, logs and backups, and calculating a percentage of the free voicemail capacity compared to the total size for all voicemail currently stored. When this voicemail storage reaches 100%, no new voicemails are recorded until users delete some messages from their mailboxes.

Downloaded from www.Manualslib.com manuals search engine

Configuring FXO Tuning Settings

The FXO Tuning tab provides an **Auto-Tuning** button, that when clicked, runs a Tuning Wizard that automatically adjusts the audio on the AastraLink Pro. The FXO Tuning tab also provides parameters you can set to manually adjust voicepath gain.

Auto-tuning helps to maximize the audio quality of calls routed via the FXO telephone line interfaces. If the resulting gain or echo performance from the FXO Auto-Tuning Wizard is not deemed correct, the values can be overridden by manually setting the parameters on this FXO Tuning page.

Note: Generally after initial FXO tuning, it should not be necessary to modify the tuning parameters, unless a specific audio-quality issue exists. Any values assigned to these FXO tuning parameters are erased if you rerun the FXO Auto-Tuning Wizard. DO NOT rely on manual settings made on this page for normal system use.

FXO tuning is recommended for all systems at installation time, in order to tune the AastraLink to match the telephone line, minimizing echo and maximizing the audio quality.

Note: After upgrading your AastraLink Pro and logging in for the first time after the upgrade, the Administrator Web UI login prompts you to optionally run the Tuning Wizard before using the upgraded AastraLink software. This allows the audio on the AastraLink to be adjusted before using the phones in the AastraLink network. Aastra recommends you run the Tuning Wizard before using the upgraded software.

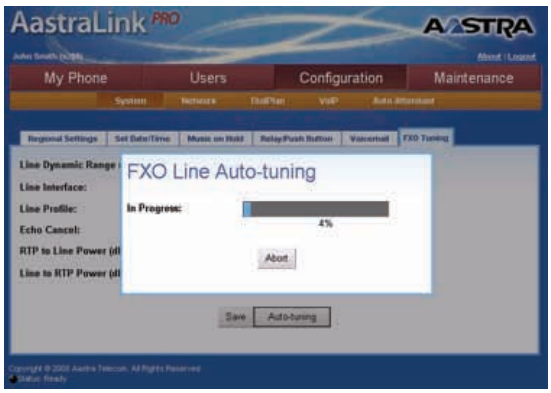
Tuning is performed using the first available (connected/idle) FXO line, and the resulting line profile is applied for all 6 FXO ports on the AastraLink. All the FXO lines must have the same/similar line profile; line interface variations between FXO ports such as having different service providers on different FXO lines are not supported.

You can start the Automatic Tuning Wizard, if required, using the Web UI at the location, ***Configuration->System->FXO Tuning.***

Downloaded from www.Manualslib.com manuals search engine

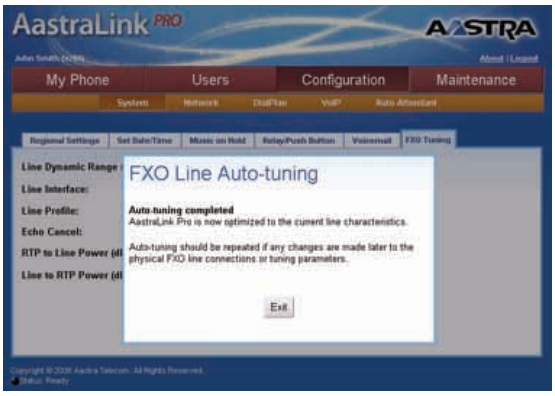
Use the following procedure to run the FXO Auto-Tuning Wizard to automatically adjust the audio on the AastraLink Pro, or set the FXO tuning parameters manully if required to adjust audio.

AastraLink Web UI

Step	Action
1	Select **Configuration->FXO Tuning..**
To run the FXO Auto-Tuning Wizard:	
2	Click the **<Auto-Tuning>** button. The Tuning Wizard automatically adjusts the FXO line hybrid parameters for best balance with your telephone network lines. This process may take up to 15 minutes to complete, but usually less.  **Note:** You can cancel the Automatic Tuning Wizard any time by clicking the <**Abort**> button during the tuning process. The parameters remain unchanged if you Abort the Automatic Tuning Wizard

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
	When the FXO Auto-Tuning Wizard is complete the following message displays.  **Note:** Auto-tuning should be repeated if any changes are made later to the physical FXO line connections or tuning parameters. Auto-tuning must also be repeated when the country is changed.
3	Click **<Exit>** to close the message window.
To adjust audio manualy:	
4	In the "**Line Dynamic Range (Boost)**" field, specify the audio boost level on these FXO lines. When transmit dynamic range is configured, the receive range is automatically balanced accordingly, so that the overall gain from the FXO network to pulse code modulation (PCM) remains within the normal target value for the appropriate country. Valid settings are: • **Standard** (-3dB) • **Full** (0dB) • **Extended** (+3dB)
5	The "**Line Interface**" and "**Line Profile**" parameters are read-only fields. These fields are updated by the Auto-Tuning Wizard if required. These line tuning parameters balance the line hybrid on the AastraLink's FXO interfaces so that it matches the characteristic line impedance.
6	In the "**Echo Cancel**" field, echo cancellation is disabled by default. This parameter allows you to enable echo cancellation for the FXO lines. Enable this parameter by checking the box.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
7	Specify the decibels to use for power when Real Time Transport Protocol (RTP) is sent TO the line, in the "**RTP to Line Power (dB)**" field. This gain parameter is used to adjust the outgoing audio levels (for example, signal amplification or attenuation). Valid range is **+6 dB to –14 dB**. Default is **-3**. **Note:** Aastra recommends you DO NOT change the default setting for this parameter because of FCC regulatory compliances.
8	Specify the decibels to use for power when Real Time Transport Protocol (RTP) is sent FROM the line, in the "**Line to RTP Power (dB)**" field. This gain parameter is used to adjust the incoming audio level (for example, signal amplification or attenuation). Valid range is **+6 dB to –14 dB**. Default is **0**. **Note:** Aastra recommends you DO NOT change the default setting for this parameter because of FCC regulatory compliances.
9	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Configuring Network Settings

You configure AastraLink Pro 160 network settings from the **Configuration->Network->Local Network** menu shown below. Network settings include the following tabs:

- **Local Network** - Allows you to specify the local network parameters for the AastraLink Pro, such as hostname, domain name, enable or disable Dynamic Host Configuration Protocol (DHCP), and specific Domain Name Servers (DNS) 1 and 2.
- **Local Services** - Allows you to specify local services on the AastraLink Pro, such as enable or disable remote office and UPnP, specify an external gateway IP, and specify Hypertext Transport Protocol (HTTP), Session Initiation Protocol (SIP), and Real-Time Transport Protocol (RTP) parameters.
- **External Services** - Allows you to specify external services on the AastraLink Pro, such as Network Time Protocol (NTP) address, Simple Mail Transfer Protocol (SMTP) relay address, SMTP relay port, and SMTP username, password, and account.

Figure 4-2. Local Network Menu

Downloaded from www.Manualslib.com manuals search engine

Editing Local Network Settings

The Local Network parameters you can specify for the AastraLink Pro 160 include:

- **Host Name**

  Name currently assigned to your AastraLink Pro 160 device. The Administrator can set the hostname of the device during initial installation and setup. Otherwise, the AastraLink Pro 160 retains the default host name of "aastralink."

  If you add multiple AastraLink Pro 160 devices to your network, they are by default named "aastralink-1, aastralink-2" etc. You should specify a unique host name for your AastraLink Pro 160 in order to make the device easily identifiable on your network.

  The hostname can be up to 10 characters maximum, no spaces or special characters allowed. For example:

  — *Aastra_1* is a valid hostname

  — *Aastra 1* is not valid (spaces are not allowed)

Note: If you change the hostname of your AastraLink Pro 160 device, then you have to reboot the IP phones in order to connect to the new hostname on your network. This phone reboot requirement also applies if the IP address of the system changes, due to DHCP server lease expiry/renewal or due to fall-back from ZeroConf to DHCP address.

- **Domain**

  Domain name you specify for your AastraLink Pro 160.

- **LAN MAC Address**

  MAC address assigned to your AastraLink Pro 160. This field is read-only.

- **Current IP Address**

  IP address assigned to your AastraLink Pro 160. This field is read-only.

Downloaded from www.Manualslib.com manuals search engine

- **Use DHCP**

  Enables or disables Dynamic Host Configuration Protocol (DHCP), in order to support dynamic/static addressing. DHCP is enabled on the AastraLink Pro 160 by default. If DHCP is enabled, but no DHCP server responds to the AastraLink Pro address request at boot time, the AastraLink falls back to using ZeroConf link-local IP addressing.

- **IP Address** (required if DHCP is disabled)

  IP Address you specify for your AastraLink Pro 160 if DHCP is disabled.

- **Subnet Mask** (required if DHCP is disabled)

  Subnet Mask you specify for your AastraLink Pro 160 if DHCP is disabled.

- **Gateway** (required if DHCP is disabled)

  Default Gateway IP Address you specify for your AastraLink Pro 160 if DHCP is disabled.

- **DNS Server 1**

  IP Address you specify for the Domain Name Server (DNS) server 1.

- **DNS Server 2**

  IP Address you specify for the DNS server 2.

Downloaded from www.Manualslib.com manuals search engine

Use the following procedure to edit local network settings for the AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->Network->Local Network.**
2	To specify a new host name for your AastraLink Pro 160, enter a new name in the **"Host Name"** field. For example: AL_bldg1
3	To specify a Domain name, enter the name in the **"Domain"** field in dotted decimal format.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
4	DHCP is enabled by default. To disable DHCP, click on "**Use DHCP**" to uncheck the box. **Note:** If you disable DHCP, then you must statically configure the following networking parameters: • **IP Address**: Set to a valid IP address. • **Subnet Mask**: Set to a valid Subnet Mask address. • **Gateway**: Set to a valid Gateway IP address. • **DNS Server 1**: Set to the IP address of DNS server 1. • **DNS Server 2**: Set to the IP address of DNS server 2.
5	Click **<Save>** to save your changes. **Note:** You must reboot your AastraLink Pro 160 in order for these network parameter changes to be implemented.

Downloaded from www.Manualslib.com manuals search engine

Editing Local Service Settings

You configure AastraLink Pro 160 local service settings from the **Configuration->Local Services** menu shown below.

Figure 4-3. Local Services Menu

Downloaded from www.Manualslib.com manuals search engine

The Local Services parameters you can specify for the AastraLink Pro 160 include:

- **Remote Office**

  Enables/disables remote access support on the AastraLink Pro 160. Default is Off. You only need to enable this field if you deploy and support remote IP phones.

  Enabling this parameter permits Aastra IP phone connections from the HTTP external port of the gateway/router (TCP port 9600).

- **UPnP**

  Enables/disables Universal Plug-n-Play (UPnP) support on the AastraLink. Default is Off. You may need to set this parameter if you are supporting calls beyond your local IP phone network (for example, if you have remote office workers or have enabled SIP trunking) that connect to the AastraLink using a UPnP router.

  Enabling UPnP

  Set UPnP to enable only if *all* of the following conditions are true:

  — The AastraLink is installed behind a UPnP capable router.

  — The UPnP protocol is enabled, and operating correctly, on the router.

  — The router is a model/brand supported by the AastraLink for UPnP.

Note: UPnP support and compatibility varies, depending on the implementation used by the specific router manufacturer. Contact Aastra Telecom for the list of UPnP routers tested with a specific AastraLink software version.

Disabling UPnP

UPnP is set to Disable by default. Accept this default setting if *any* of the following conditions are true:

— The AastraLink is installed behind a router which either does not support UPnP, or has UPnP disabled.

— The AastraLink will not be using external network connections (remote office IP phone users or SIP trunks).

— The AastraLink is installed behind a UPnP enabled router, but for some reason UPnP is not functioning.

Downloaded from www.Manualslib.com manuals search engine

— The AastraLink is installed behind a UPnP enabled router, but the AastraLink Pro 160 does not currently support the router model.

When this parameter is set to Disable (the default), in order for the AastraLink to support external calls, you have to:

— Manually configure the AastraLink external connection parameters (see page 4-28), and

— Manually configure the equivalent port forwarding on the Internet gateway/router so that the AastraLink is reachable from IP phones and SIP trunks outside the LAN.

- **External Gateway IP**

  Specifies the IP Address of the external gateway/router that the AastraLink uses to communicate with the remote IP phones. If you enable UPnP support, then the AastraLink automatically populates this field. If UPnP is not enabled but remote office is enabled, you must manually enter the IP address, FQDN or DNS hostname of the public network.

- **HTTP Port Start**

  Specifies the public network HTTP port on the router that the AastraLink uses to communicate with the remote IP phones. Default is 51510.

  This port must be forwarded to port 9600 on the AastraLink from the public/external side of the Internet gateway/router. Doing so allows remote office IP phone users to connect to the AastraLink device and the local phone network.

  Note that for security reasons, remote IP phone users cannot directly access the AastraLink Web UI using port 9600. Thus, remote IP phone users must use the IP phone UI for all operations.

  If UPnP is enabled, port forwarding is attempted automatically (see the *HTTP Port Range* parameter).

Note: The AastraLink Pro 160 listens for remote office HTTP traffic on port 9600. If you are manually configuring port-forwarding parameters for HTTP, use *HTTP Port Start* as the external port being forwarded to port 9600 on the AastraLink Pro 160.

Downloaded from www.Manualslib.com manuals search engine

- **HTTP Port Range**

  Specifies the HTTP port range (offset from the *HTTP Port Start*) used to support remote office IP phone UI and Web UI connections. Default is 100.

  If UPnP is not enabled, then the only HTTP port that must be forwarded from the public/external side of the network to the AastraLink is the single port specified in the *HTTP Port Start* field. (If you disable UPnP, then *HTTP Port Range* is automatically disabled as well.)

- **SIP Port Start**

  Specifies the base port number for SIP connections (default = 5060). This port must be forwarded to the AastraLink from the public/external side of the Internet gateway/router for SIP trunk and remote office calls to succeed. If UPnP is enabled, then port forwarding is attempted automatically.

- **SIP Port Range**

  Specifies the number of ports to attempt SIP connections (default = 1, port 5060 only).

Downloaded from www.Manualslib.com manuals search engine

- **SIP Registration Expiration**

  Specifies the time, in seconds, that the SIP phone and AastraLink SIP trunks use for their SIP registration renewal timer.

  Usually no change is required for this parameter, but some SIP trunk service providers may refuse registration if the period is set shorter than a specified value, for example 3600 seconds. Default is 120.

- **RTP Port Start**

  Specifies the public network first RTP port of the range on the router that the AastraLink uses to communicate with IP phones for external SIP calls. Default is 3000. This is the start of the range of UDP ports (from 'RTP Port Start' to 'RTP Port Start + RTP Port Count' that must be forwarded to the AastraLink from the public/external side of the Internet gateway/router for SIP trunk and remote office calls to succeed. If UPnP is enabled, then port forwarding is attempted automatically (see the *RTP Port Range* parameter).

- **RTP Port Range**

  Specifies the RTP port range (offset from the RTP Port Start) used to support the voice path for remote office IP phones and SIP trunk calls. Default is 300.

  UPnP will attempt to allocate and forward the number of external ports specified by *RTP/RTCP Port Count*. Forwarded ports lie within the range: *RTP Port Start* through *(RTP Port Start + RTP Port Range)*.

- **RTP/RTCP Port Count**

  Specifies the total number of media stream ports the AastraLink can support simultaneously for remote phone users.

  Each incoming or outgoing call requires one media stream; each media stream uses one RTP port and one RTCP port. To set this parameter, multiply the maximum numbers of simultaneous calls supported on the AastraLink by two.

  For example, the default setting of 20 allows the AastraLink to support 10 incoming or outgoing calls simultaneously.

Downloaded from www.Manualslib.com manuals search engine

Notes:

1. Aastra recommends accepting the *RTP/RTCP Port Count* default setting of 20. Increasing the default setting beyond 20 may result in call degradation or service outage.

2. When UPnP is enabled, then *RTP/RTCP Port Count* is the maximum number of ports forwarded. Some UPnP router implementations limit the number of ports that may be forwarded. If fewer ports are forwarded, then the number of simultaneous calls supported by the AastraLink is restricted.

3. If UPnP is not enabled, then you should manually forward ports: *RTP Port Start* through *(RTP Port Start + RTCP Port Count -1)* from the public/external side of the network to the AastraLink. All ports for RTP must be contiguous.

Configuring Remote Office Support

If you are installing and supporting Aastra IP phones at a remote site - for example, a home office - you need to enable remote office support on the AastraLink Pro 160.

Note the following information about configuring remote office support:

- The procedure for configuring remote office support varies slightly, depending on whether or not you installed your AastraLink Pro 160 behind a UPnP enabled/supported router. Refer to the *UPnP* parameter description on page 4-27 before you begin the procedure described in this section.
- You must initially configure phones intended for remote locations at the central office before deployment.

For complete instructions on configuring your Aastra IP phones for remote deployment, see the following in this guide:

— Appendix A, “Remote Office Configuration of the IP Phone (Phone-Side)”

— Appendix B, “Remote Office Configuration of the AastraLink Pro 160 (Server-Side)”

Downloaded from www.Manualslib.com manuals search engine

Use the following procedure to configure AastraLink remote office support.

AastraLink Web UI

Step	Action
1	Select **Configuration->Network->Local Services.**
2	The “Remote Office” field is disabled by default. To enable remote office support, set Remote Office to **On.**
3	The “UPnP” field is disabled by default. Set UPnP to **<Off>** or **<On>**, as required by your specific network configuration. See the UPnP parameter description on page page 4-27 for more information.

Downloaded from www.Manualslib.com manuals search engine

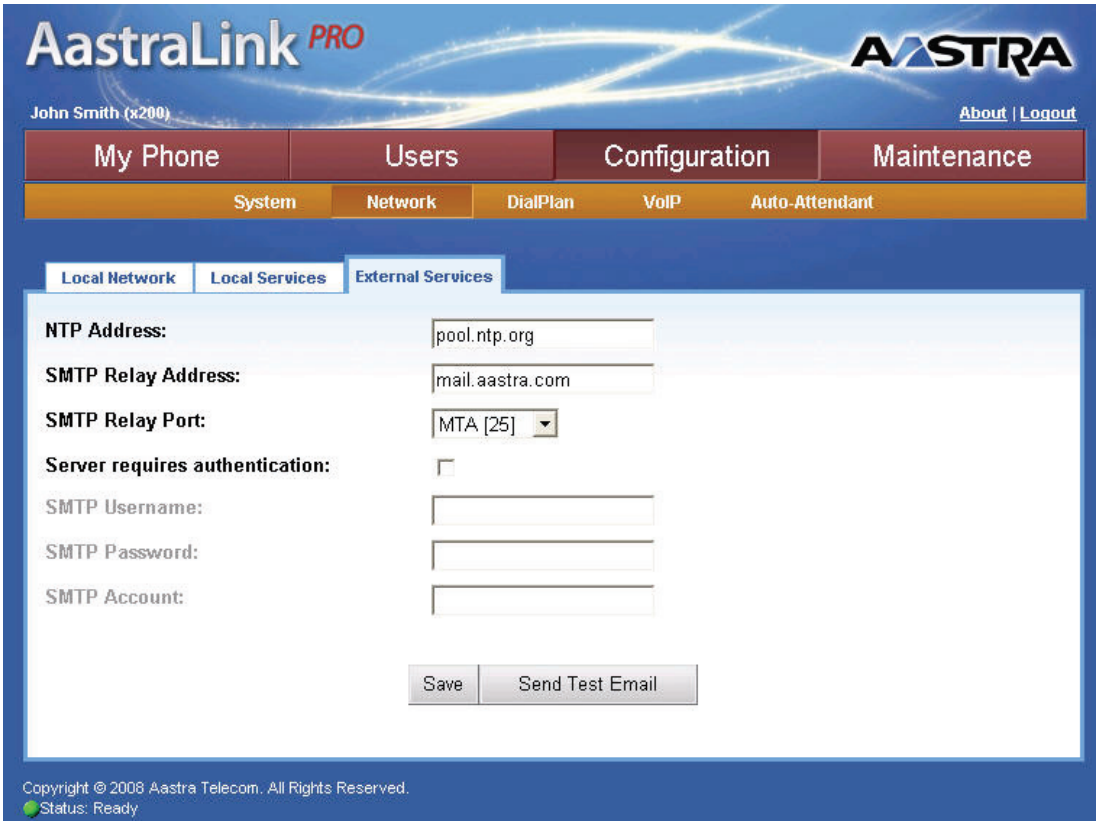
AastraLink Web UI

Step	Action
4	Depending on whether or not you enabled UPnP, specify any other required Local Services parameters, as described on page 4-28. Default values for each field are as follows: • **External Gateway IP** **<blank>** • **HTTP Port Start** **51510** • **HTTP Port Range** **100** • **SIP Registration Expiration** **120 seconds** • **RTP Port Start** **3000** • **RTP Port Range** **300** • **RTP/RTCP Port Count** **20**
5	Click on **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Editing External Services Settings

Depending on your network requirements, administrators can configure external services for the AastraLink Pro 160.



The External services parameters you can specify for the AastraLink Pro 160 include:

- **NTP Address**

  The Network Time Protocol (NTP) pool is a collection of networked time servers that provide the accurate time to other computers on IP networks. By default, this parameter is set to **pool.ntp.org**.

Downloaded from www.Manualslib.com manuals search engine

- **SMTP Relay Address**

  Simple Mail Transfer Protocol (SMTP) is the standard used for email transmissions across IP networks. The AastraLink Pro 160 is capable of acting as its own Mail Transfer Agent (MTA) for SMTP email. By default, the AastraLink attempts to perform DNS lookups and resolve the destination email server for direct delivery to the end user.

  To disable DNS lookup and direct delivery of email, and use an external SMTP relay instead, specify the IP address or fully qualified domain name (FQDN) of the relay in the SMTP Relay Address field. For example, the SMTP relay server may be a Microsoft Exchange server on your LAN, or a server that your ISP provides.

Note: The SMTP Relay Address configures the internal LAN or external WAN address of the SMTP relay server. The SMTP relay server must be correctly configured to permit incoming email traffic from the AastraLink Pro 160 to be forwarded through the relay to the end users.

- **SMTP Relay Port**

  The SMTP Relay Port is the port that handles SMTP traffic to/from the relay server. Valid ports you can select from are:

  - Mail Transfer Agent (MTA), port 25 for RFC 2822 authentication (default)
  - Mail User Agent (MTU), port 587 for RFC 2476 message submission

- **Server requires authentication**

  If your network server requires authentication for SMTP, you can enable this feature using the "**Server requires authentication**" parameter. Enabling this parameter requires that you also specify an SMTP Username, Password and Account for the server.

  If server authentication is disabled, the AastraLink uses the value specified for the **Domain** parameter at the location *Configuration->Network->Local Network*. If no value is specified for the Domain parameter, the AastraLink Pro uses the default value in the format aastralink@ hostname.

- **SMTP Username**

  (If server authentication enabled) The SMTP Username specifies the username for SMTP account authentication.

Downloaded from www.Manualslib.com manuals search engine

- **SMTP Password**

  (If server authentication enabled) The SMTP Password specifies the password for SMTP account authentication.

- **SMTP Account**

  (If server authentication enabled) The SMTP Account specifies the **FROM:** email address used for sending SMTP email. For example, myaccount@myisp.com.

Use the following procedure to configure External services.

AastraLink Web UI

Step	Action
1	Select **Users->Network->External Services.**
2	Specify a Network Time Protocol (NTP) Address in the **"NTP Address"** field. For example: pool.ntp.org
3	To use an external SMTP relay server, specify the IP address or FQDN of the relay in the **"SMTP Relay Address"** field. For example: 192.32.12.123

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
4	Select the SMTP relay port that handles SMTP traffic on the SMTP server, in the **"SMTP Relay Port"** field. Valid values are: • **MTA** (port 25) (default) • **MUA** (port 587)
Server Authentication Requirement	
5	If your network server requires authentication, enable the field "**Server requires authentication**" by checking the box. Disable this feature by unchecking the box.
6	If "Server requires authentication" is enabled, enter an SMTP username in the "**SMTP Username**" field. This username must appear in the SMTP message received by the server.
7	If "Server requires authentication" is enabled, enter an SMTP password in the "**SMTP Password**" field. This password must appear in the SMTP message received by the server.
8	If "Server requires authentication" is enabled, enter an SMTP account in the "**SMTP Account**" field. For example: myaccount@myisp.com This account must appear in the SMTP message received by the server.
9	Click **<Save>** to save your changes.

Send Test Email

After you configure and save the SMTP settings at the location, *Configuration->Network->External Service*s, you can test the settings to make sure they work correctly by clicking the **<Send Test Email>** button.

Clicking the **<Send Test Email>** automatically sends an email to the administrator's email address configured at the location, *My Phone->Preferences->My Profile*. An example of a received SMTP test email is as follows:

```
Email sent at:  12:06:17 PM 24-04-2008
```

Receiving the email verifies that the SMTP settings are correct. If you do not receive the email, go back to *Configuration->Network->External Service*s, and edit the values for the SMTP fields as required.

Downloaded from www.Manualslib.com manuals search engine

Configuring Dial Plan Settings

You configure AastraLink Pro 160 dial plan settings from the **Configuration->DialPlan** menu shown below.

A dial plan describes the number and pattern of digits that a user dials to reach a particular telephone number. The default dialing plan for the AastraLink Pro 160 is 3-digits, starting with extension 200 (administrator). Users are assigned extensions 201, 202, etc.

Note: The Administrator can select an alternative 3-digit or 4-digit dialplan and first extension when initially configuring the system from the administrator phone TUI. This cannot be changed after the user phones have been added; a factory-default of the system greenfield is required to change the dialplan.

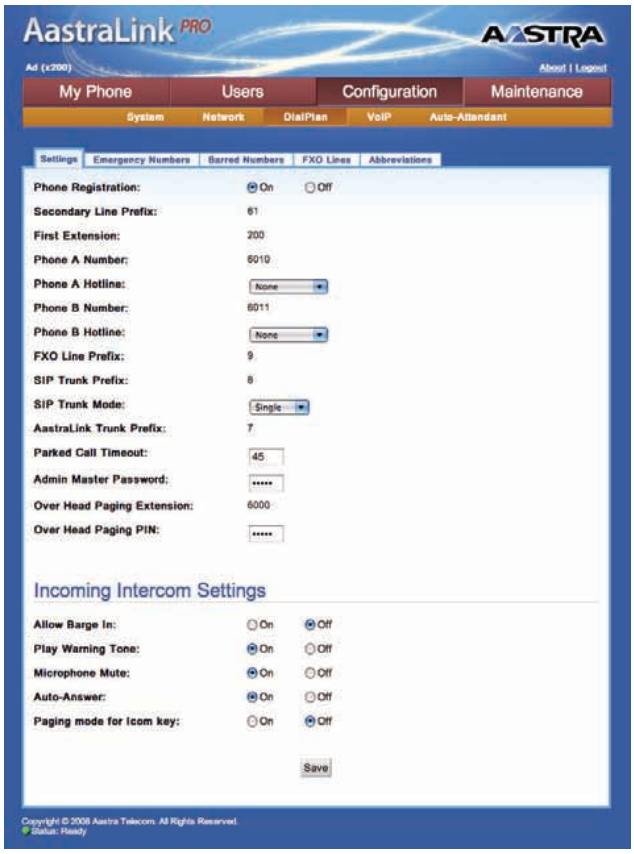


Figure 4-4. Dial Plan Menu

Downloaded from www.Manualslib.com manuals search engine

The Dial Plan menu includes the following tabs:

- **Settings** - Allows you to enable or disable per-phone registration, Phone A or Phone B hotline extensions, SIP trunk mode, parked call timeout, Administrator password, overhead paging PIN, and paging and intercom parameters.
- **Emergency Numbers** - Allows you to specify dial plans for dialing emergency numbers on the current phone.
- **Barred Numbers** - (for outgoing calls only) Allows you to specify numbers that are blocked PSTN numbers that cannot be dialed from the AastraLink Pro 160.
- **FXO Lines** - Allows you to specify where incoming calls on individual FXO lines (up to 6 lines) get routed to. This tab also allows you to specify for a Shared Line Appearance (SLA) line, how many rings the phone performs before transferring the call.
- **Abbreviations** - Allows you to specify abbreviated numbers to be used as a shortcut when dialing from a phone connected to the AastraLink Pro. These are numbers that are frequently used for system-wide shortcuts.

Downloaded from www.Manualslib.com manuals search engine

Local Dial Plan

Table 4-1 describes the AastraLink Pro 160 Dialplan Numbers and Directory Numbers.

Table 4-1. AastraLink Pro 160 Dialplan

DialPlan Numbers	Directory Numbers
0	0 Operator
1 Abbreviated Dialing	00 through 99
2* Extn	2xx/2xxx SIP Extension
3* Extn	3xx/3xxx SIP Extension
4* Extn	4xx/4xxx SIP Extension
5 Unused	
6 Feature Access 0 Local Features 00 Paging 01 Relay 02...09 Unused 10 FXS A 11 FXS B 12 AutoFAX 20...99 Unused 1 Local CallP Features 00 IVR 01 Vmail 02 ConfMod 1 Unused 2* virtual extension 3* virtual extension 4* virtual extension 5...9 Unused 2 Meetme Extn 3 Meetme Extn 4 Meetme Extn 5 Call/Ring Groups 6 Paging/Intercom Groups 7 Call parking 8 Unused 9 Unused	 6000 Overhead paging 6001 Activate Relay 6010 FAX/Phone A 6011 FAX/Phone B 6012 FAX A/B Auto selection 6100 Auto-attendant IVR 6101 Voicemail 6102 Conference Moderator 612xxx Secondary SIP phones 613xxx Secondary SIP phones 614xxx Secondary SIP phones 62xxx Meet-me owned by 2xxx 63xxx Meet-me owned by 3xxx 64xxx Meet-me owned by 4xxx 65xxx Ring Group xxx 66xxx Paging Group xxx 67xx Parked Call xx
7* AastraLink Trunk	7+ (access digit) + xxx/xxxx *access digit = 0 - 9 (assigned by the administrator) * xxx/xxxx = 3 or 4 digit extn
8* SIP Trunk	8 + (access digit*) + external number *access digit = 0 - 9 (assigned by the administrator)
9* PSTN (FXO Access)	9 external - PSTN line call

Downloaded from www.Manualslib.com manuals search engine

Star Codes

Table 4-2 describes the AastraLink Pro 160 star codes implemented.

Table 4-2. AastraLink Pro 160 Star-Codes

Star Code	Description
*5XXX	Intercom to extension XXX
*60	Public Address/Overhead paging
*66	Voicemail
*76XXX	Directed Call Pickup of extension XXX
*78	Do Not Disturb
**xxx	Voice mailbox of extension xxx

Specifying Dial Plan Settings

Use the following procedure to specify dial plan settings for the AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan->Settings.**
2	Set the **"Phone Registration"** field to one of the following options: **On** - (default) Allows new IP phones to register with the AastraLink Pro 160. **Off** - Prevents new phones from registering with the AastraLink Pro 160.
3	The "**Secondary Line Prefix**" is the dial plan prefix of **61**, reserved for Secondary SIP phones. This number is not directly dialable. This field is read-only. For more information about this prefix, see the **Dial Plan Table** on page 4-40.
4	The "**First Extension**" is the phone number or extension of the Adminnistrator phone on the network. This field is read-only after using the initial Adminnistrator phone to set the greenfield system configuration.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
5	The "**Phone A Number**" is the dial plan prefix of **6010**, used for dialing over the FXO Port A. This field is read-only. For more information about this prefix, see the **Dial Plan Table** on page 4-40.
6	In the "**Phone A Hotline**" field, select the extension or phone number you want to use to dial out over the FXO Port A as a hotline. If the phone is set to use this line, when a User picks up the handset to dial, there is no dial tone. Valid values are any configured phone extension in your network or **None**.
7	The "**Phone B Number**" is the dial plan prefix of **6011**, used for dialing over the FXO Port B. This field is read-only. For more information about this prefix, see the **Dial Plan Table** on page 4-40.
8	In the "**Phone B Hotline**" field, select the extension or phone number you want to use to dial out over the FXO Port B as a hotline. If the phone is set to use this line, when a User picks up the handset to dial, there is no dial tone. Valid values are any configured phone extension in your network or **None**.
9	The "**FXO Line Prefix**" field is the dial plan prefix of **9,** used to dial out over an FXO line for external PSTN calls. This field is read-only. For more information about this prefix, see the **Dial Plan Table** on page 4-40.
10	The "**SIP Trunk Prefix**" field is the dial plan prefix of **8**, used to dial out over an external SIP trunk. This field is read-only. For more information about this prefix, see the **Dial Plan Table** on page 4-40. For more information about the SIP Trunk Prefix", see "SIP Trunking" on page 4-76.
11	The "**SIP Trunk Mode**" allows you to select whether a user dials out over a single SIP trunk or multiple SIP trunks. Valid values are: • **Single** • **Multiple** If this field is set to "**Single**", a user can dial 8+number. If set to "**Multiple**", a user can dial 8+index+number. For more information about the SIP Trunk Mode feature, see "Single and Multiple SIP Trunks" on page 4-84.
12	The "**AastraLink Trunk Prefix**" field is the dial plan prefix of **7**, used to dial out over an AastraLink trunk. This field is read-only. For more information about this prefix, see the **Dial Plan Table** on page 4-40.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
13	After a caller parks a call, the extension of the caller who parked the call will ring again to remind them that they put a call on park. In the "**Parked Call Timeout"** field, enter the time, in seconds, that the AastraLink Pro 160 waits before it rings back to remind the IP Phone user that he parked a call. This parameter is a global setting for all calls that are parked (not a per-call basis). Valid values are **1 to 3600 (1 hour)**. Default is **45**. **Note:** A value of 0 for this parameter sets the Parked Call Timeout to 45 seconds (default).
14	To change the password for the administrator's phone, specify a new password in the **"Admin Master Password"** field. The default Administrator Master Password is 22222. This password is used for admininistrator TUI access on SIP phones, admin login on the MBU-400 webui, and as the system default account "admin" prior to the local system administrator first registering and configuring the system from their SIP phone. The first 4 digits of this password are also used for 420d handset VoIP and system settings menu. **Warning**: Changing the phones administrator password may result in all phones rebooting to accept the changed password.
Configuring Paging and Intercom Parameters	
15	The "**Overhead Paging Extension**" field is the dial plan prefix of **6000**, used to dial into an overhead paging system. This field is read-only. For more information about this prefix, see the **Dial Plan Table** on page 4-40.
16	In the "**Overhead Paging PIN**" field, set the overhead paging PIN that a User needs to enter in order to enter the overhead paging system. This PIN is also used for the "All SIP phones" default Paging Group 660. For more information about overhead paging, see "Configuring Overhead Paging" on page 4-49 and Chapter 3, the section, "Ring Groups and Paging Groups" on page 3-38.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
17	You can enable or disable the following Paging and Intercom features on the AastraLink: • Allow Barge In (Default is "**Off**") • Play Warning Tone (Default is "**On**") • Microphone Mute (Default is "**On**") • Auto Answer (Default is "**On**") • Paging Mode for Icom Key (Default is "**Off**") For more information about these settings, see "Configuring Paging and Intercom Options" on page 4-50.
18	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Configuring a Dial Plan for Auto-Fax

Overview

The AastraLink Pro 160 allows you to connect FAX machine(s) to the FXS ports on the rear panel to send and receive fascimile communications.

A FAX machine connected to either FXS port can send outgoing faxes using the standard AastraLink Pro dialplan (i.e. 9 for outbound FXO line).

For incoming FAX calls, the Auto-FAX feature of the auto-attendant will monitor the line for incoming FAX calls and automatically re-route call to the waiting fax machine connected to an FXS port.

FAX Indication Tones

When two Facsimile machines first connect, they exchange tones to provide an indication that this is a FAX call rather than a voice call. The calling party sends a CNG (half-second 1100Hz tone repeated every three seconds), followed by V.21 (a rapidly alternating sequence of short tones using frequency-shift-keying).

The Auto-FAX feature uses a Digital Signal Processor on AastraLink Pro model 160 hardware to listen for V.21 negotiation and CNG FAX calling tones. If either of these FAX tones is detected while the auto-attendant main menu is answering the call, the Auto-FAX feature dials the number **6012** into the IVR's digit collector to re-route the FAX call.

FAX Call Re-routing

The "**6012**" is a dedicated virtual extension on the AastraLink dial plan, which terminates the FAX calls to the FXS A port (if idle) or to a Busy tone if the FXS is in use (to trigger the calling FAX machine to retry at a later time).

Note: Auto-FAX does not support FXS B at this time.

This type of provisioning allows you to leave a FAX machine connected to the FXS A port, to receive all incoming FAX calls received from FXO lines by the Auto-Attendant (either during Day or Night service, depending on provisioning).

Auto-FAX functionalty is always enabled on the AastraLink Pro for all incoming FAX calls received from FXO by the Auto-Attendant main menu.

Downloaded from www.Manualslib.com manuals search engine

FXO Incoming Call Routing

Auto-FAX does not operate if the FXO line has been configured to use incoming call forwarding to a facility other than Auto-Attendant, or if Auto-Attendant is not the default incoming call destination.

If either of these call routes has been provisioned to use a facility other than the Auto-Attendant (for example Operator, SIP extension or Ring group) the IVR menu is not reached by the incoming call; therefore the Auto-FAX functionality cannot occur.

In this case, it is necessary for the person who answers the FAX call and hears the CNG tone to perform the routing manually. This can be done simply by using the phone's Transfer key (Xfer) to transfer the call to extension 6012, allowing Auto-FAX to then handle the call routing to FXS A or Busy tone as appropriate.

You can use the following parameter to provision the Open/Closed hours Incoming Call destination as the Auto-Attendant:

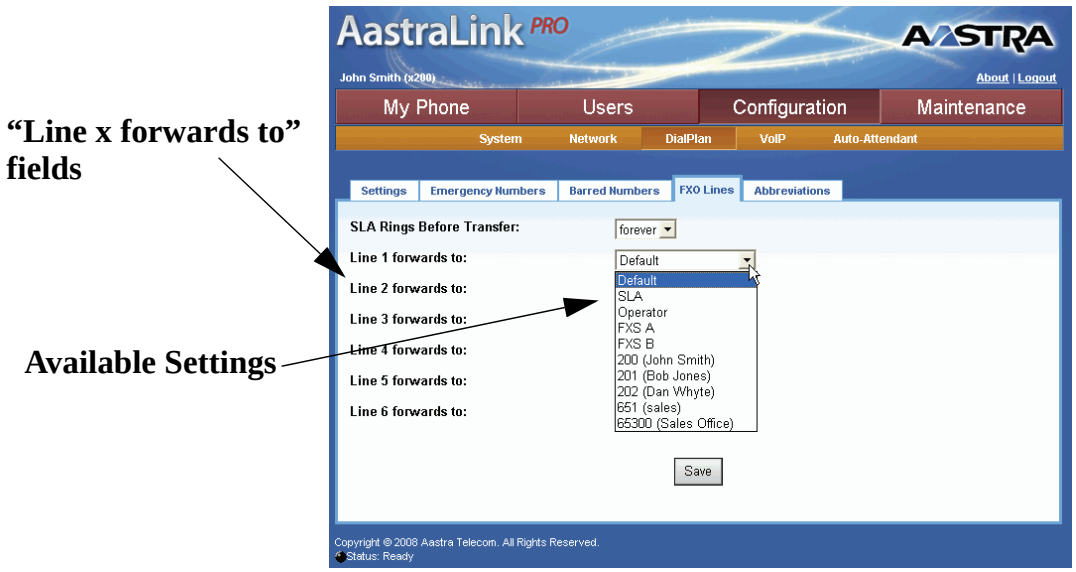
- In the "**Incoming Calls go to**" field at the location ***Configuration->Auto-Attendant->Settings***

"Incoming Calls go to" field set to "Auto-Attendant"

Downloaded from www.Manualslib.com manuals search engine

You can use the following parameter to provision the per-FXO line incoming call forwarding to "**Default**".

In the "**Line x forwards to**" field at the location ***Configuration->Dial Plan->FXO Lines***



For infomration about configuring the Auto-Attendant to route FAX calls, see "Configuring a Dial Plan for Auto-Fax" on page 4-45.

Configuring FXO Lines for Manually Forwarding Auto-Fax

The AastraLink Pro 160 allows you to connect FAX machine(s) to the FXS ports on the rear panel to send and receive fascimile communications.

A FAX machine connected to either FXS port can send outgoing faxes using the standard AastraLink Pro dialplan (i.e. 9 for outbound FXO line).

For incoming FAX calls, the Auto-FAX feature of the auto-attendant will monitor the line for incoming FAX calls and automatically re-route call to the waiting fax machine connected to an FXS port.

Downloaded from www.Manualslib.com manuals search engine

However, you can override the Auto-Attendant from answering incoming FAX calls by provisioning the FXO lines to reroute the FAX calls instead. FXS Caller ID displays for calls set to the FXS device. Calling name/extension and number (where known) display according to the country-specific CLID capability set.

Use the following procedure to configure the FXO Lines to answer incoming FAX calls.

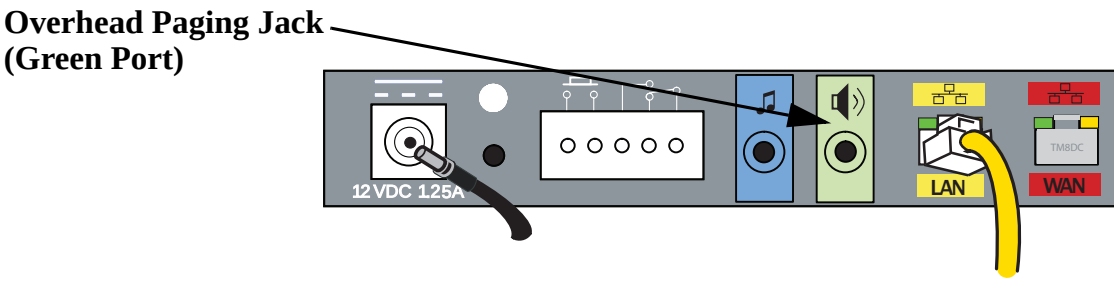
AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan->FXO Lines**.
2	Select a line from **Line 1** through **Line 6**.
3	In the "**Line x forwards to**" field, choose where you want incoming FAX calls to get fowarded. Valid values are: • SLA • Operator • FXS A • FXS B • <phone number or extension number> **Note:** Any configured setting other than "Default" will override the auto-attendant setting at the location *Configuration->Auto-Attendant->Settings*. All incoming fax calls are forwarded to the destination you specify for this "Line x forwards to" field. For the SLA, Operator, and extension and phone number settings, the person who answers the call must manually dial and transfer the incoming FAX call to 6012. For the FXS A and FXS B settings, the incoming fax calls are routed to that FXO.
4	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Configuring Overhead Paging

The AastraLink Pro 160 has an overhead paging jack (located on the back of the device) that you can directly connect to an amplifier in order to support overhead paging.



Back of AastraLink Pro 160

To access the pager, an IP phone user goes through the Auto-Attendant, and specifies the correct password, as described in the following procedure.

AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan.**
2	Specify the password (PIN) IP phone users enter to access overhead paging in the **"Overhead Paging PIN"** field. For example, enter: 6000 **Note:** Default overhead paging PIN is **22222**.
3	Click **<Save>** to save your changes.

For information about configuring Paging Groups, see Chapter 3, the section, "Ring Groups and Paging Groups" on page 3-38.

Downloaded from www.Manualslib.com manuals search engine

Configuring Paging and Intercom Options

If you've added a Paging Group to the AastraLink Pro, you can enable/disable the following Paging and Intercom dial plan options via the Web UI at the location ***Configuration->Dial Plan->Settings***.

- **Allow Barge-In** - Enables or disables the paging and intercom to occur while a phone is in the active call state.
- **Play Warning Tone** - Enables or disables the warning tone to be heard before a page or an intercom call on the phone.
- **Microphone Mute** - Enables or disable the speakerphone to mute when a page or an intercom call is received by the phone.
- **Auto-Answer** - Enables or disables automatic answering of an intercom call by the phone. If disabled, icom will be treated as a normal incoming call.
- **Paging Mode for Icom Key** - Enables or disables the Intercom key to act as a Paging key, providing a list of paging groups instead of a number-entry field.

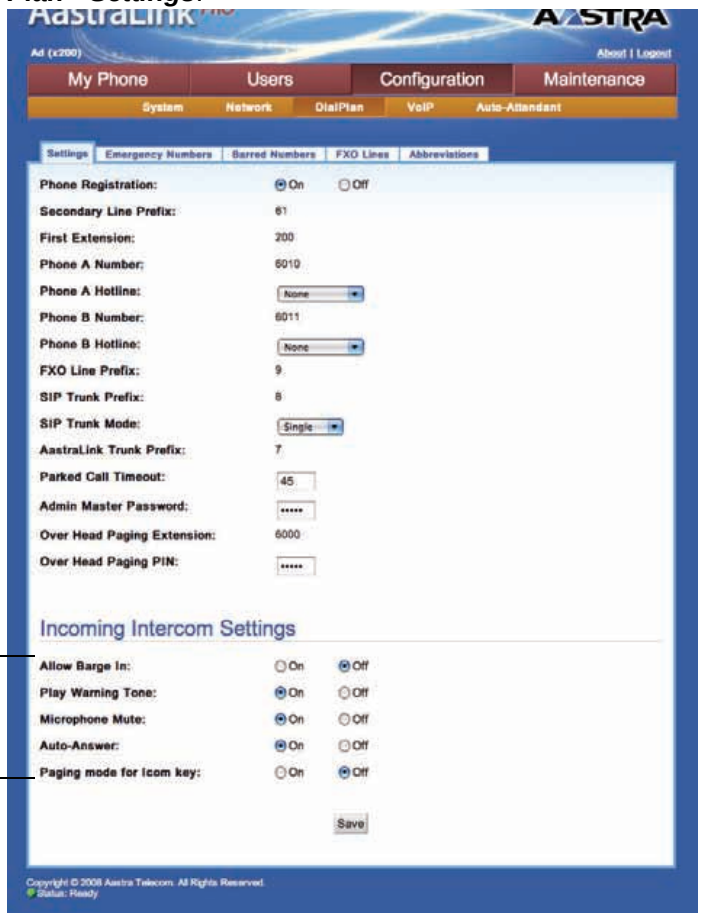
The values configured for the Dial Plan page apply to all phones on the system; there is no per-phone configuration of these options.

Downloaded from www.Manualslib.com manuals search engine

If you have added a Paging Group to the AastraLink Pro, use the following procedure to configure Paging and Intercom options if required. This procedures assumes a Paging Group has already been added to the AastraLink Pro.

AastraLink Web UI

Step	Action
Paging and Intercom options for Paging Groups	
1	After adding a Paging Group using the procedure in Chapter 3, the section, "Adding a Group" on page 3-49, select ***Configuration->Dial Plan->Settings***.



Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
2	Enable or disable the following options by clicking in the "**On**" (enable) or "**Off**" (disable) field: • Allow Barge In (Default is "**Off**") • Play Warning Tone (Default is "**On**") • Microphone Mute (Default is "**On**") • Auto Answer (Default is "**On**") • Paging Mode for Icom Key (Default is "**Off**")
3	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Dial Plan for Meet-Me Conference Bridges

This advanced feature of the AastraLink Pro enhances the current 3-way conference available on the Aastra SIP phones. This feature provides AastraLink-hosted ad-hoc Meet-me Conference bridges for all users.

Conference bridges are created dynamically by the AastraLink when the feature is accessed. If the moderator is the first to connect to the bridge, he/she is prompted to choose a PIN; otherwise, the conference begins immediately with any users waiting on hold (with music) joined to the conference.

A virtual conference bridge is associated to every SIP extension by adding an accessor prefix 6 to the users phone number. For example, user 200's meet-me bridge is at 6200. (For more information about the conferencing dial plan, see the **Dial Plan Table** on page 4-40).

A user calling into his/her home extension conference bridge becomes moderator automatically. If calling from another extension (or externally) the user may authenticate his/her voicemail credentials to become moderator. More than one moderator login is permitted in a conference; if no moderator exists (i.e. all moderators leave the conference) the conference is terminated.

When a moderator dials into a conference from a phone other than the his/her own phone, the number **6102** must be dialed to allow password authentication of the moderator. (For more information on dial plan numbers, see the see the **Dial Plan Table** on page 4-40.)

The moderator can optionally configure a PIN on the conference bridge. If the PIN is configured, users must enter this PIN before they can be joined into the conference on the bridge.

Note: Any users currently in the hold queue prior to a moderator joining will be added automatically. To differentiate between a PIN moderated and a non-PIN moderated call, the moderator will NOT be prompted to create a PIN for a conference if there are already users on hold waiting. Such a conference shall be considered 'insecure'. The moderator can leave the conference, and cause it to be terminated, before re-connecting and assigning a PIN.

Downloaded from www.Manualslib.com manuals search engine

Host Capacity Limitations

Meet-me conferencing capability is dependent on the available host CPU capacity. The AastraLink Pro supports a total of 12 simultaneous host-routed sessions.

One session is defined as a SIP trunk call, a remote office call, a conference call participant, a voicemail call, or an auto-attendant call.

Calls directly between local SIP phones do not use a host session and are excluded from the 12 session limit.

Configuring an Emergency Dial Plan

Public telephone networks in countries around the world have a single emergency telephone number (emergency services number), that allows a caller to contact local emergency services for assistance when required. The emergency telephone number may differ from country to country. It is typically a three-digit number so that it can be easily remembered and dialed quickly. Some countries have a different emergency number for each of the different emergency services, or may have additional numbers for contacting regional / locality specific emergency services.

You can specify the digits to dial on the IP phone for contacting emergency services. Once you specify the emergency number(s) on the phone, you can dial those numbers directly on the dial pad when required, and the phone automatically dials to those emergency services without needing to enter the PSTN (FXO) prefix digit 9.

Emergency Number	Description
911	An emergency number for the United States and Canada
080	An emergency number for Mexico

These emergency numbers are also used when checking that an emergency call is not in progress for the FXO priority override feature described in the Chapter 1, the section, “Emergency Call Priority” on page 1-9.

By default, the emergency number 911 is configured for the AastraLink device.

Downloaded from www.Manualslib.com manuals search engine

Use the following procedure to configure other emergency numbers for your network.

AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan->Emergency Numbers.**
2	To add a new emergency number, click **<Add Emergency Number>.**
3	Specify a phone number, then click **<Add >**. The Emergency Numbers list updates to display the number you specified. **Note:** To delete an emergency number, select the number(s) you want to delete, then click **<Delete Selected Emergency Numbers>.**

Configuring Barred Numbers

Barred numbers are blocked PSTN numbers that cannot be dialed from the AastraLink Pro 160. You can use the Web UI to specify a barred numbers list for the IP phones on your network. The barred numbers list applies to outgoing calls only.

For networked systems, using 8-prefix AastraLink trunk dialing between sites, the barred number list is also applied locally on each AastraLink Pro for incoming dialed numbers. This allows flexible and secure provisioning rules to be enforced for toll-bypass (i.e. local PSTN breakout) as if the remote system had dialed the number directly from the local system.

To bar a specific number, simply add the number to the barred numbers list. To bar a specific number pattern, you use the following format:

<barred number>*

For example, to block 800-number calls, you add **800*** to the barred numbers list. The AastraLink automatically adds the PSTN and SIP prefixes as required.

Downloaded from www.Manualslib.com manuals search engine

Note: When barring PSTN numbers, do not bar the "9" range numbers, or calls to 911 and 9911. These numbers must not be blocked.

Adding a Barred Number

Use the following procedure to specify a barred number for the AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan->Barred Numbers.**
2	Click **<Add Barred Number>**
3	Specify a phone number, or pattern of numbers, to add to Barred Numbers list, then click **<Add>** The Barred Numbers list updates to display the number you specified.

Deleting a Barred Number

Use the following procedure to delete a barred number from the AastraLink Pro 160 barred number list.

AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan->Barred Numbers**
2	Click on the check-box next to the number you want to delete.
3	Click **<Delete Selected Barred Numbers>**

Downloaded from www.Manualslib.com manuals search engine

Configuring FXO Lines

On the AastraLink Pro, you can configure individual FXO lines (up to 6 lines) for which incoming calls are routed. The following table identifies the destinations for which you can choose to route your incoming calls on each line.

FXO Line Destinations	Description
Default	Sends incoming calls according to the configured incoming call route on the Auto-Attendant page.
SLA (Shared Line Appearance)	Sends the incoming call to the Shared Line Appearance (SLA) line shared by all users in a Ring Group.
Operator	Sends the incoming call to the Operator.
FXS A	Sends the incoming call to the FXO Port A.
FXS B	Sends the incoming call to the FXO Port B.
<extension number> <phone number>	Sends the incoming call to the specified extension or phone number.

You can also specify the number of rings you want the destination phone to ring before your phone transfers the incoming call.

Note: This feature also allows you to provision FXO lines regardless of the line state (i.e. even if there is no FXO line voltage) to enable for FXO loopback door entry phone use.

Downloaded from www.Manualslib.com manuals search engine

You can configure the FXO lines using the Web UI at the location, ***Configuration->Dial Plan->FXO Lines***.

Configuring FXO Lines for Incoming Calls

Use the following procedure to configure the FXO Lines to answer incoming calls.

AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan->FXO Lines**.
2	Select a line from **Line 1** through **Line 6**.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
3	In the "**Line x forwards to**" field, choose where you want incoming calls to get fowarded and click **<Save>**. Valid values are: • Default • SLA • Operator • FXS A • FXS B • <phone number or extension number>
4	(optional) If you select **SLA** as your destination for incomig calls, in the "**SLA rings before transfer**" field, select the number of rings you want the destination phone to ring before transferring the incoming call. Valid values are: • forever (destination phone rings until the line is picked up or the line goes to voicemail) • 1 (phone rings once, then the call is transferred) • 2 (phone rings two times, then the call is transferred) • 3 (phone rings three times, then the call is transferred) • 4 (phone rings four times, then the call is transferred) • 5 (phone rings five times, then the call is transferred) • 6 (phone rings six times, then the call is transferred)
5	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Configuring FXO Lines for Shared Line Appearance (SLA)

The AastraLink Pro provides Shared Line Appearance (SLA) which provides key system features in addition to its existing Private Branch eXchange (PBX) functionality.

SLA and PBX can be used exclusively (i.e. all FXO lines as SLA, or all FXO lines as PBX) or in a mixed mode. To differentiate between modes, the AastraLink user interface refers to non-SLA lines as ’Pool’ lines, as they provide pooling of incoming and outgoing lines for call processing purposes.

About Shared Line Appearances

A traditional key system has telephones with multiple buttons ("keys") and lights that indicate which lines are in use. When you want to place a call, the user presses a button to directly select the external FXO line connected to the telephone company.

AastraLink SLA is supported on all Aastra SIP phone models (except 420d DECT handsets and 51i SIP phones) and uses a visual indication to show the line state (idle/ringing/in-use/hold). Indications are provided via the LED on a line hard-key (L1, L2, etc.), LCD on a soft-key, or LED on a programmable key.

The state of the line - busy, ringing or hold - is shown by the flashing state of the LED or icon indicator; for hard-keys the color of the indicator also shows whether the current phone (green) or another phone (red) is using the line.

On the 9480i, 9480i CT, 6755i, 6757i, and 6757i CT, the busy and idle indicators show on the IP phone screen display next to the softkey or programmable key configured for SLA functionality. When the monitored user is idle, an icon with the handset on-hook shows next to the SLA softkey or programmable key. When the monitored user is on an active call, a small telephone icon is shown with the handset off-hook.

On the 9143i, 6751i, and 6753i, the LED lights next to each SLA programmable key illuminate steady to indicate the monitored line is off-hook or unregistered. The LED goes off when the line is idle.

Downloaded from www.Manualslib.com manuals search engine

In addition to monitoring the idle and busy state, the SLA feature also supports the ringing state. When the monitored user is idle, there is a small telephone icon shown with the handset on-hook. When the monitored user is in ringing state, there is a small bell icon shown. When the monitored user is on an active call then a small telephone icon is shown with the handset off-hook.

SLA and the AastraLink Pro

SLA is configurable on a per FXO basis on the AastraLink Pro. When no FXOs are configured as SLA, all 6 FXO ports perform the PBX dial plan operation as outlined in Release 1.1 of the AastraLink Pro.

Any FXO ports not allocated for SLA use, are available for processing PBX calls and for Pool outgoing calls. A configurable timer allows SLA incoming calls to overflow to PBX dial plan routing (auto-attendant, ring groups etc.), and outgoing PBX calls will overflow to SLA lines if no FXO Pool line is available.

SLA membership - i.e. whether a phone is to participate in the SLA key system, or whether it is to be permitted access to PBX Pool lines only - can be configured independently for each local and remote office phone.

Downloaded from www.Manualslib.com manuals search engine

SLA Key Mapping

FXO line to SIP phone key mapping for SLA varies by phone model.

The following table describes the mapping of the hard and soft line keys on the SIP phone with the FXO ports on the rear of the AastraLink Pro.

SLA Supported Phone Models	FXO 1	FXO 2	FXO 3	FXO 4	FXO 5	FXO 6
	Mapping To AastraLink Pro					
9480i / 9480iCT base	L1	L2	L3	L4	Softkey L5	Softkey L6
9143i	L1	L2	L3	Softkey L4	-	-
6757i / 6757iCT base	L1	L2	L3	L4	Softkey L5	Softkey L6
CT handset	As base	As base	As base	As base	As base	As base
6755i	L1	L2	L3	L4	Softkey L5	Softkey L6
6753i	L1	L2	L3	Softkey L4	-	-
6751i	-	-	-	-	-	-
6730i / 6731i	L1	L2	Softkey L3	Softkey L4	-	-
DECT 420d handset	-	-	-	-	-	-

For all phones, off-hook maps to "Pool line" which allows PBX dial plan calling. The pool line feature sets the phone to L7 (9480i, 9480i CT, 6757i, 6757i CT, 6755i) or L5 (9143i, 6731i & 6753i) in the phone configuration when it is in the idle state.

Note: SLA is not supported on Model Phones 6751i and 420d Handsets. These phones default to the line pool operation only. If all FXO lines are configured for SLA, these phone models will not be able to receive incoming FXO calls.

Downloaded from www.Manualslib.com manuals search engine

Using AastraLink SLA from the SIP Phones

If SLA is configured on an FXO port, the following occurs for all phones:

- The line indicator flashes quickly when a call comes in, and the phone rings.
- When the call is connected and answered, the line indicator lights up solid. For hard-line keys (L1, L2, etc.) it will show green on the answering phone, and red on all other phones.
- When the call is placed on hold, the line indicator flashes slowly
  For hard-line keys (L1, L2, etc.) it will show green on the holding phone, red on all other phones.
- Any phone can pickup a call from the held state.

Configuring SLA on the AastraLink

Use the following procedure to configure SLA on the AastraLink Pro.

AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan->FXO Lines**.
2	Select a line from **Line 1** through **Line 6**.
3	In the "**Line x forwards to**" field, choose which line you want to assign SLA (Shared Line Appearance), and select **SLA** from the option list.
4	Click **<Save>** to save your changes. **Note:** SLA membership is enabled by default on the AastraLink Pro at the location ***Users->User List-><select specific User or Add Phone>***.

Downloaded from www.Manualslib.com manuals search engine

Enabling/Disabling Individual SLA Memberships

By default, All existing SIP phones (and any new SIP phones added to the system) use the shared line FXO configuration if it is enabled on the AastraLink.

Phones can be individually removed from the SLA feature by editing the phone in the Administrator's Web UI user list, and toggling the 'SLA Enabled' option.

Downloaded from www.Manualslib.com manuals search engine

SLA Configuration Changes

If the AastraLink SLA configuration changes for any FXO, all phones are rebooted for the line key change to be applied. If membership is changed for a single phone, that phone only reboots.

Note: If you enable the SLA feature on the AastraLink:

- Phone Xfer is not supported for SLA lines.
- Redial and Speed-dial default to using the Pool line.
- When the Speaker key is pressed, or receiver goes off-hook, Pool line is automatically selected.

When a User dials on an IP Phone, the phone assumes that the line on which the user is dialing is a Pool line. If SLA is enabled on the phone, the phone changes its behavior when the User dials out on a line. If SLA is enabled and specific features on the phone are used (for example, redial, speeddial, transfer), the User must specifically direct the feature to use the SLA line for the feature to work in that mode.

The features affected by SLA include:

- Redial list
- Speed-dial softkey
- 3-way conference
- Call transfer

Redial	
To perform a Redial using a Pool line....	press <**Redial**> then press <**Redial**> again.
To perform a Redial using an SLA line L1....	press <**Redial**> then press <**L1**> key.
Speeddial	
To perform a Speeddial using the Pool line....	press the Speeddial key.

Downloaded from www.Manualslib.com manuals search engine

To perform a Speeddial using the SLA line L1.... **Note:** Because Pool lines require prefix 9 for outside access, and SLA lines require direct dialing, the same speeddial key cannot be used in both modes.	press <L1> and then press the Speeddial key.
3-Way Conference	
Conferencing can be initiated for Pool or SLA incoming calls, but the target of the conference (the third party being invited to join the call) can only be a Poll line or local extension. SLA lines cannot be the invitee of a 3-way conference call.	
Call Transfer	
The transfer (Xfer) key is a Pool line only feature, and does not operate for incoming SLA calls. SLA lines cannot be the target of a call transfer.	

Downloaded from www.Manualslib.com manuals search engine

Configuring Abbreviations

The AastraLink Pro 160 allows you to define a list of abbreviated numbers to be used as a shortcut when dialing from a phone connected to the AastraLink Pro. These are numbers that are frequently used for system-wide shortcuts.

For each abbreviation that is configured, when the abbreviation is dialed from IVR menu or IP phone, the AastraLink places the outgoing call using the full specified number instead. This provides an effective system-wide speed dial or shortcut dialling method, and allows for exceptions to other features such as barred numbers to be provisioned.

The AastraLink automatically dedicates the prefix '1' for abbreviated numbers in the dialing plan. The abbreviated number that you set must be two digits and is limited to 100 numbers (00 to 99). This abbreviated number is a virtual extension, which is entirely separate from the extension number of the users IP phone. For more information about creating virtual extensions, see Chapter 3, the section, "Virtual Extension Numbers (for Ring and Paging Groups)" on page 3-42.

The Administrator can create, edit, and/or delete abbreviated numbers.

Note: On the global dial plan, abbreviated numbers are reserved as primary digit 1.

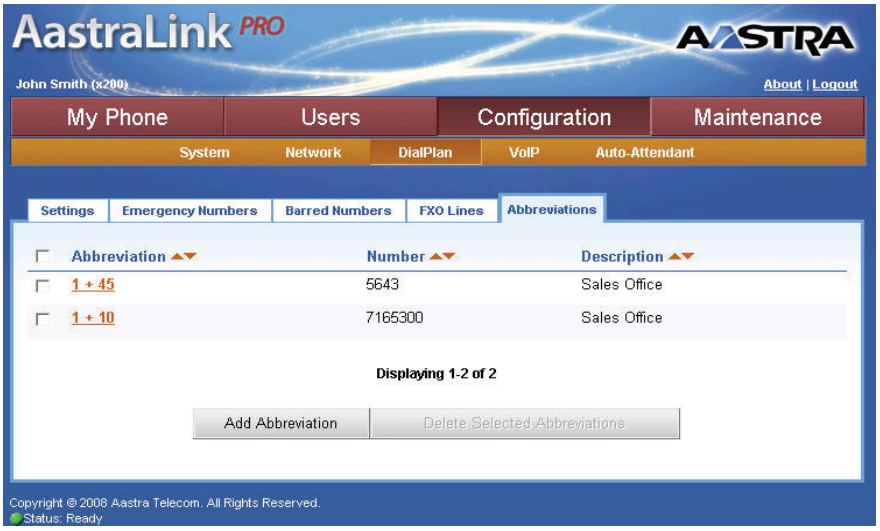


Figure 4-5. Abbreviations Menu

Downloaded from www.Manualslib.com manuals search engine

In the illustration above, 1+45 is the abbreviated number that the phones use as a shortcut for dialing the longer User Group virtual extension associated with the sales office.

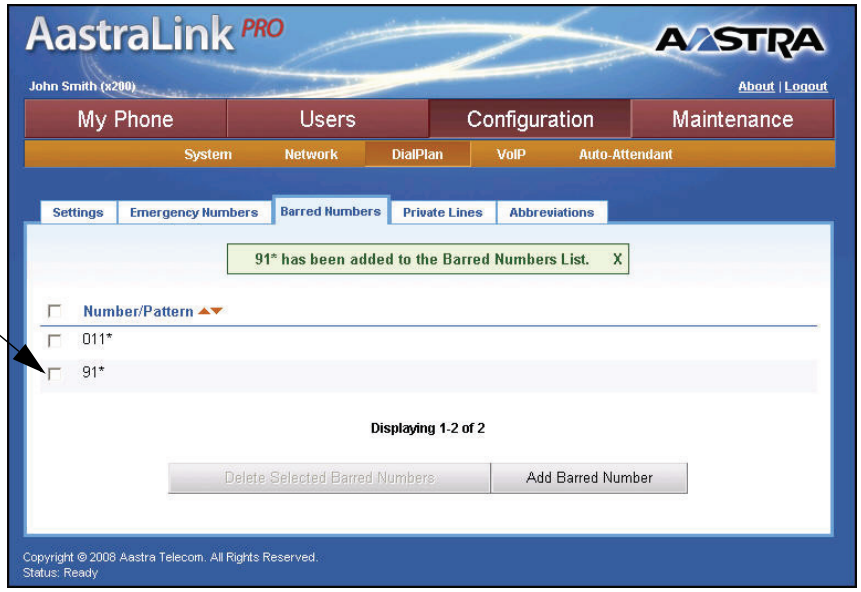
Examples of Abbreviated Number Configurations

The following examples illustrate the configuration of abbreviated numbers.

Example 1

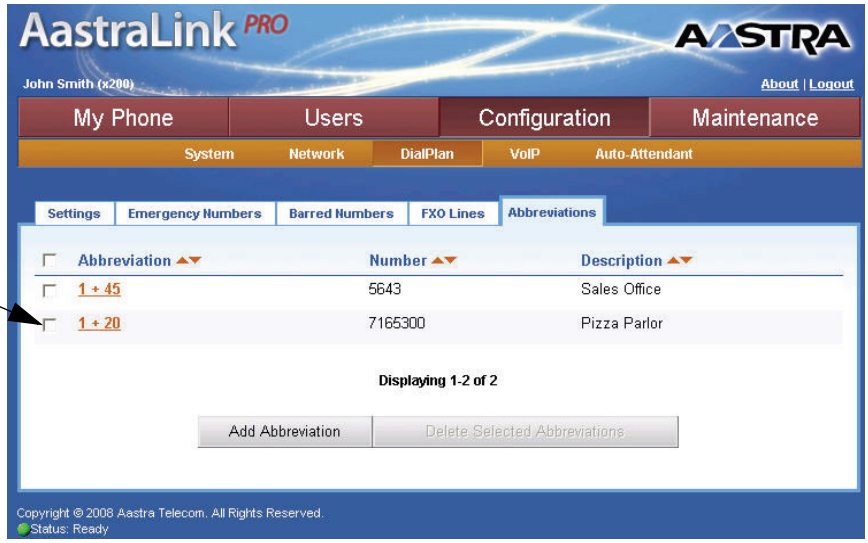
The first illustration below shows call barring as 91* so that external long distance is blocked. The second illustration shows an abbreviation of 1+20 added which routes to phone number 7165300, so that users can still dial out for pizza.

Call Barring Number of 91*



Downloaded from www.Manualslib.com manuals search engine

Abbreviated Number of 1+20 for Pizza Parlor



Example 2

The first illustration shows an abbreviation of 1+10 added, which routes to phone number 7165300. This is an inter-office AastraLink trunk call to call group 300 using AastraLink trunk number 1. This is accessing the Sales team using an AastraLink at another location.

Abbreviated Number of 1+10 for Sales Office

Downloaded from www.Manualslib.com manuals search engine

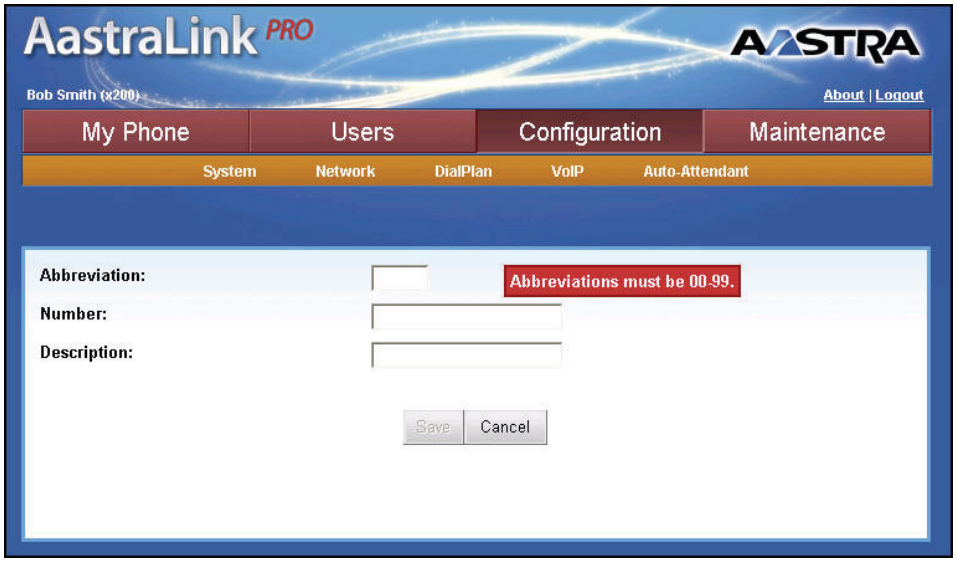
User Group of 65 + 300

Downloaded from www.Manualslib.com manuals search engine

Configuring Abbreviated Numbers

Use the following procedure to configure an abbreviated number.

AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan->Abbreviations.**
2	Click **<Add Abbreviation>.** 
3	In the **Abbreviation** field, specify a two-digit number that the AastraLink dials as a shortcut prior to a user dialing an outgoing number. Valid values must be between 00 and 99. **Note:** The AastraLink automatically prepends "**1**" to the abbreviated number you specify.
4	In the **Number** field, specify an extension or an outside phone number (up to 20 digits) for the AastraLink to dial when using the specified abbreviated number.
5	(Optional) In the **Description** field, specify a description that identifies this abbreviated number.
6	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Editing Abbreviated Numbers

Use the following procedure to edit an abbreviated number.

AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan->Abbreviations.**
2	In the **Abbreviation** column, click on the abbreviated number you want to edit.
3	Edit the **Abbreviation**, **Number**, and **Description** as required.
4	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Deleting Abbreviated Numbers

Use the following procedure to delete an abbreviated number.

AastraLink Web UI

Step	Action
1	Select **Configuration->Dial Plan->Abbreviations.**
2	In the **Abbreviation** column, place a check mark in the box for the abbreviated number you want to delete.
3	Click **<Delete Selected Abbreviations>** button. The following prompt displays: "*Are you sure you want to delete the selected item?*"
4	Click **<Yes>** to delete the abbreviated number, and the associated phone number and description.

Downloaded from www.Manualslib.com manuals search engine

Configuring VoIP Settings

You configure AastraLink Pro 160 Voice over IP (VoIP) settings from the ***Configuration->VoIP*** menu shown below.

Figure 4-6. Voice-Over-IP Menu

Downloaded from www.Manualslib.com manuals search engine

The VoIP menu includes the following tabs:

- **SIP Trunking** - Allows you to enable SIP trunking on the AastraLink Pro in order to support internetworking between your Aastra IP phones, and the SIP devices on a VoIP service provider network. On the AastraLink Pro, you can configure up to 10 SIP trunks for your network.
- **SIP DIDs** - Allows you to specify SIP Direct Inward Dialing (DID) prefixes for SIP trunks. Direct Inward Dialing (DID) is a service of a local phone company that provides a block of telephone numbers for calling into a company's private branch exchange (PBX) system.
- **AastraLink Trunks** - Allows you to specify AastraLink trunking to support internetworking between Aastra IP phone networks.
- **Mobility Base Units** - Allows you to add, delete, or reboot Mobility Base Units (MBUs) to/from the AastraLink network.

The following paragraphs describe each of these types of VoIP configurations.

Downloaded from www.Manualslib.com manuals search engine

SIP Trunking

The AastraLink Pro 160 supports single and multiple SIP trunking. You can configure a single SIP trunk to communicate and connect the AastraLink Pro to a service provider's switch to make outgoing PBX calls, OR you can configure multiple SIP trunks to allow the outgoing PBX call to route over the least cost routing (LCR) trunk to the service provider's switch. For more information about single and multiple SIP trunks see, "Single and Multiple SIP Trunks" on page 4-84.

You enable SIP trunking on the AastraLink Pro 160 in order to support internetworking between your Aastra IP phones, and the SIP devices on a VoIP service provider network. On the AastraLink Pro, you can configure up to 10 SIP trunks for your network. See Figure 4-6.

Note: When you enable SIP trunking, note the following important information:

- You can configure up to 10 SIP trunks between your AastraLink Pro 160 IP phone network and a service provider network.
- Depending on whether or not you enable UPnP support on your AastraLink device (that is, whether or not your AastraLink is installed behind a UPnP enabled router), you may need to manually specify the router RTP port start/range used for external SIP calls, and forward this port range and the SIP port (5060) from the public/external Internet gateway/router to the AastraLink local IP address. Refer to "Editing Local Service Settings" on page 4-26 for more information.

Downloaded from www.Manualslib.com manuals search engine

Incoming SIP trunk calls

Call routing

The AastraLink Pro 160 automatically routes incoming SIP calls using the **TO:** address in the header of the SIP message. If the address matches a Direct Inward Dialing (DID) rule and results in a valid SIP extension, the call is routed directly to that extension. If no match is found, the call is sent to the current incoming call destination (for example, open or closed hours routing to auto-attendant, operator, or user group).

Calling party identification

The AastraLink Pro 160 SIP phones automatically display the calling party name and number (CLID) when an incoming SIP call is received on a registered trunk, using the **FROM:** address received in the header of the SIP message. The CLID is also stored in the call detail records (CDR logs).

Outgoing SIP trunk calls

Call routing

The AastraLink Pro 160 default prefix for outbound SIP trunk calls is set to 8. When Aastralink Pro users make a call, they dial the following:

(prefix digit) + (access digit) + (directory number)

Where:

prefix digit = 8

SIP trunk access digit = 0 - 9

directory number

For example, the number **82**9785551212 routes the outbound call over SIP trunk #2 to directory number **9785551212.**

For another example, the number **8**9783225434 routes the outbound call over a single SIP trunk to directory number **9783225434**.

The AastraLink Pro 160 routes any calls with a matching SIP-trunk prefix and trunk-accessor digit, to the appropriate SIP trunk. You can provision up to 10 SIP trunks.

Downloaded from www.Manualslib.com manuals search engine

Reference

For a table of dial plan numbers, see Table 4-1 “AastraLink Pro 160 Dialplan” on page 4-40.

Called party identification

By default, the AastraLink Pro 160 sets the calling party name and number (CLID) in the **FROM:** address of the SIP trunk call, using the extension number of the phone which originated the call. In cases where the SIP trunk service provider does not accept arbitrary CLID, AastraLink allows a static CLID to be provisioned instead; setting the "**Username**" field on the SIP trunk configuration overrides the per-call CLID and uses this value for all outgoing calls placed to the SIP trunk.

When selecting ***Configuration->VoIP->SIP Trunking***, the following screen displays.

Downloaded from www.Manualslib.com manuals search engine

The parameters you can specify for SIP Trunking are:

- **Use Local Network Address**

  Enables/disables SIP trunking to use the local subnet address for the SIP signalling rather than the external (UPnP / external gateway) address. It is only necessary to set this value if the SIP registrar / outbound proxy is multi-homed on both the private and the public network.

- **Send NAT Keep-Alives**

  Enables/disables the sending of SIP OPTIONS messages to periodically maintain the UDP port binding in the NAT.

- **Relaxed Authentication**

  Enables/disables authentication of incoming SIP INVITE's and matching of peers based on IP address without examining the port number.

- **Registrar Server**

  Supplied by your service provider. Specifies the IP address of the remote endpoint (service providers registrar server) that connects the AastraLink Pro 160 to your service provider SIP network.

- **Registrar Port**

  Supplied by your service provider. Specifies the port number of the remote device (registrar server) on which SIP communications are received. By default this is set to 5060.

- **Username (Outgoing Caller ID)**

  Supplied by your service provider. A name (or phone number) you use to connect to the service provider network that displays on the caller's outgoing phone. For example: 6174365000.

  If provisioned, the specified Caller ID is used to override the default FROM: address in the SIP signalling. Refer to "Called party identification" on page 4-78.

- **Display Name (Incoming Caller ID)**

  Overrides Caller ID on incoming calls. A call originating externally, coming in over a trunk with "Display Name" set, has its Caller ID information overwritten and displays on local SIP phones as this value.

Downloaded from www.Manualslib.com manuals search engine

- **Realm**

  Only required if supplied by your service provider. Specifies the Authentication domain within the destination network, where SIP call steering to a specific media gateway is required.

- **Authentication Username**

  Only required if supplied by your service provider. Used to authenticate with the service provider if you are using a different account name then your username.

- **Authentication Password**

  Supplied by your service provider. Used to authenticate your access to the service provider network. For example: 15000.

- **Outbound Proxy**

  Only required if your local network does not transparently route SIP calls to the public SIP service provider. Used to route outgoing calls through this device rather than direct to the registrar server.

- **Outbound Proxy Port**

  Only required if using an Outbound Proxy. Specifies the proxy port on the Outbound Proxy.

Adding a SIP Trunk

Use the following procedure to add a SIP Trunk to the AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->VoIP->SIP Trunking**
2	In the "**Use Local Network Address**" field, place a checkmark in the box to enable SIP trunking to use the local subnet address for the SIP signalling rather than the external (UPnP / external gateway) address. It is only necessary to set this value if the SIP registrar / outbound proxy is multi-homed on both the private and the public network. Disable this field by unchecking the box. Default is disabled.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
3	In the "**Send NAT Keep-Alives**" field, place a checkmark in the box to enable the sending of SIP OPTIONS messages to periodically maintain the UDP port binding in the NAT. Disable this field by unchecking the box. Default is disabled.
4	In the "**Relaxed Authentication**" field, place a checkmark in the box to enable the authentication of incoming SIP INVITE's and the matching of peers based on IP address without examining the port number. Disable this field by unchecking the box. Default is disabled.
5	In the "**Registrar Server**" field, specify the IP Address of the Registrar Server that connects your AastraLink Pro 160 to the service provider network. For example: 192.32.210.24 Your service provider supplies this IP Address.
6	In the "**Registrar Port"** field, enter the port number of the remote device (registrar server) on which SIP communications are received. Default setting of **5060.** You service provider supplies this port number.
7	In the "**Username (Outgoing Caller ID)**" field, specify a name and/or number to use to connect to the service provider network. This value displays on the caller's outgoing phone. For example: John Davis 5551212 **Note:** Setting the "**Username (Outgoing Caller ID)**" field on the SIP trunk configuration overrides the per-call CLID, and uses the "Caller ID" value you specify here for all outgoing calls placed to the SIP trunk
8	In the "**Display Name (Incoming Caller ID)**" field, specify a name and/or number to be displayed as the Caller ID for incoming calls over this trunk. A call originating externally, coming in over a trunk with "Display Name" set, has its Caller ID information overwritten and displays on local SIP phones as this value. For example: John Davis 5551212

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
9	(only if required by Service Provider) In the "**Realm**" field, specify the Authentication domain within the destination network, where SIP call steering to a specific media gateway is required. If not required, leave blank. Your service provider supplies this value.
10	(only if required by Service Provider) In the "**Authentication Username**" field, enter the user name used to authenticate with the service provider if you are using a different account name then the "Username" you specified in step 7. For example: 6175555000 **Note:** The "**Authentication Username**" value may differ from the "**Username (Outgoing Caller ID)**" value. Your service provider supplies this number.
11	(only if required by Service Provider) In the "**Authentication Password**" field, enter the password required to access the service provider's network. For example: 51000 Your service provider supplies this password.
12	In the "**Outbound Proxy**" field, enter the outbound proxy IP address or fully qualified domain name used to route outgoing calls through this device rather than direct to the registrar server. **Note:** This field is only required if your local network does not transparently route SIP calls to the public SIP service provider.
13	In the "**Outbound Proxy Port**" field, enter the outbound proxy port number of the outbound proxy in step 12. **Note:** This field is only required if you are using an outbound proxy.
14	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Deleting a SIP Trunk

You can delete a specific SIP trunk configuration or all SIP trunk configurations from the AastraLink Pro using the <**Clear**> button on the "**SIP Trunking**" menu.

Use the following procedure to clear a configuration for a SIP Trunk on the AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->VoIP->SIP Trunking**
Clearing a SIP Trunk Configuration	
2	In the **"Dial Prefix"** column, place a check mark in the box for the SIP trunk configuration you want to delete.
3	Click **<Clear>**. The following message displays: *"Are you sure you would like to delete the selected items?"*
4	Click **YES** to delete the SIP trunk." The SIP trunk configuration you selected is deleted from the AastraLink Pro 160.
Clear All SIP Trunk Configurations	
5	In the **"Dial Prefix"** check box, place a check mark in the box to select ALL SIP trunk configurations.
6	Click **<Clear>**. The following message displays: *"Are you sure you would like to delete the selected items?"*
7	Click **YES** to delete all SIP trunks." All the SIP trunk configurations are deleted from the AastraLink Pro 160.

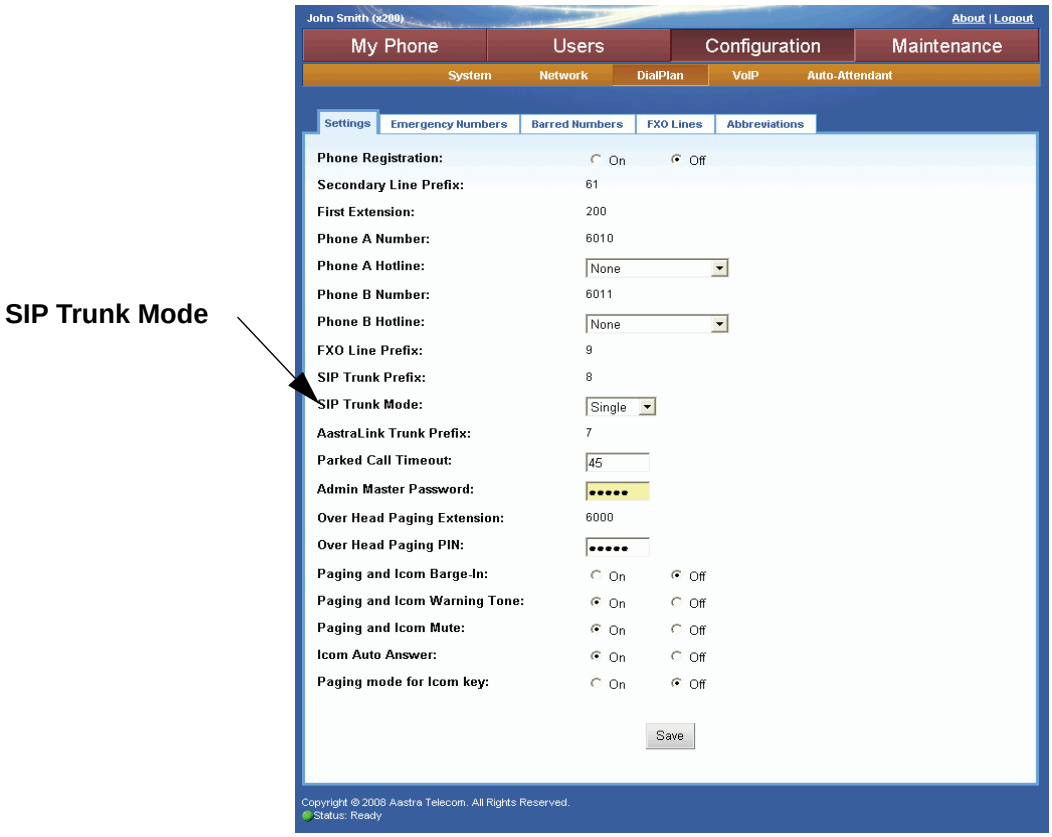
Downloaded from www.Manualslib.com manuals search engine

Single and Multiple SIP Trunks

The AastraLink Pro supports the dialing of a prefix + index when multiple or single SIP trunks are setup. The user must dial 8+index+number to dial out.

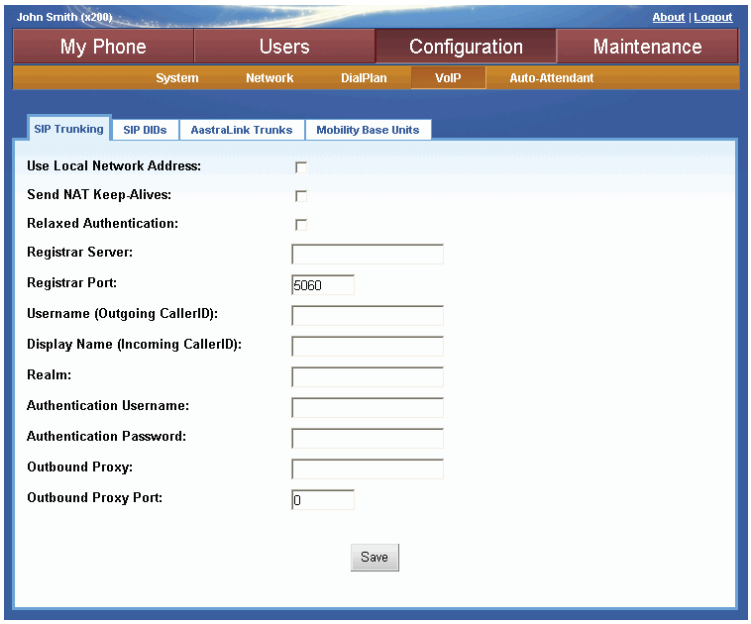
The AastraLink Pro also supports single-digit prefixes on a single SIP trunk. A user can dial 8+number when a single SIP trunk is configured, and 8+index+number when multiple SIP trunks are configured.

You can select whether to configure single or multiple SIP trunks by choosing "**Single**" or "**Multiple**" for the **SIP Trunk Mode** parameter at the location, ***Configuration->Dial Plan->Settings***. For more information about setting the SIP Trunk Mode parameter, see "Specifying Dial Plan Settings" on page 4-41.



Downloaded from www.Manualslib.com manuals search engine

Setting the SIP Trunk Mode to "**Single**" displays the following screen at ***Configuration->VoIP->SIP Trunking***. Configure the single SIP trunk parameters as described in "SIP Trunking" on page 4-76.



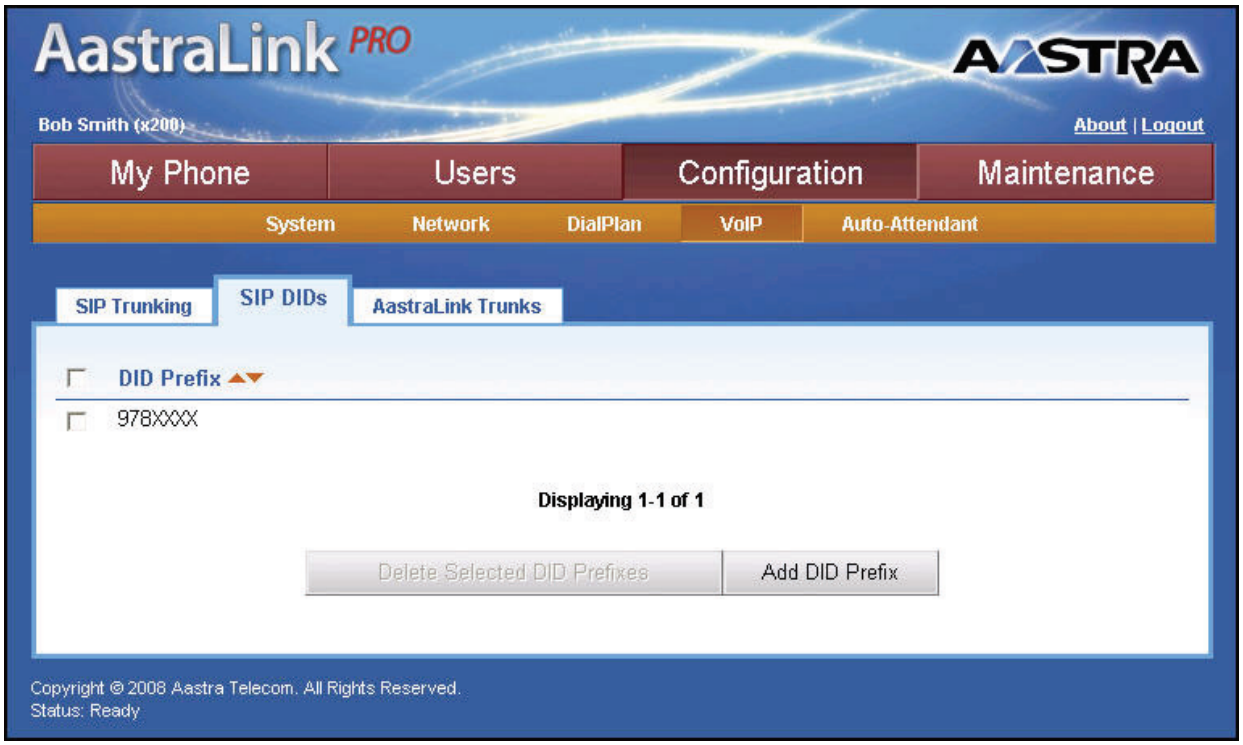
Setting the SIP Trunk Mode to "**Multiple**" displays the following screen at ***Configuration->VoIP->SIP Trunking***. Configure the multiple SIP trunk parameters as described in "Configuring VoIP Settings" on page 4-74.

Downloaded from www.Manualslib.com manuals search engine

SIP Direct Inward Dialing (DID)

An administrator can provide SIP Direct Inward Dialing (DID) prefixes for SIP trunks. Direct Inward Dialing (DID) is a service of a local phone company that provides a block of telephone numbers for calling into a company's private branch exchange (PBX) system.

Using DID, a company can offer its employees a different direct-dial PSTN number for each SIP phone, with either system-wide DID pattern matching or direct-mapped user DID entries used to route calls.



This feature on the VoIP Menu applies on a global basis for all phones in the AastraLink network.

Note: Direct mapping DIDs have highest priority, followed by patterns, and then the Interactive Voice Response (IVR) if no DID is matched. SIP DID mapping can also be applied on a phone-by-phone basis using the SIP DID Number parameter when editing or adding phones on the **Users Menu**.

Downloaded from www.Manualslib.com manuals search engine

Adding a SIP DID

Use the following procedure to add a SIP DID to the AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->VoIP->SIP DIDs.**
2	Click **<Add DID Prefix>**.
3	Enter the number for the DID prefix in the text box and click **<Add>**. For example, 978555. The SIP DID displays as: 9785553XXXX.

Deleting a SIP DID

Use the following procedure to delete a SIP DID from the AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->VoIP->SIP DIDs.**
Deleting a single SIP DID	
2	In the **"DID Prefix"** column, place a check mark in the box for the SIP DID you want to delete.
3	Click **<Delete Selected DID Prefixes>**. The following message displays: *"Are you sure you would like to delete the selected items?"*
4	Click **YES** to delete the SIP DID." The SIP DID you selected is deleted from the AastraLink Pro 160.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
Deleting All SIP DIDs	
5	In the **"DID Prefix"** check box, place a check mark in the box to select ALL SIP DIDs.
6	Click **<Delete Selected DID Prefixes>**. The following message displays: *"Are you sure you would like to delete the selected items?"*
7	Click **YES** to delete all SIP DIDs." All the SIP DIDs are deleted from the AastraLink Pro 160.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Trunking

You enable AastraLink trunking to support internetworking between Aastra IP phone networks. For example, if you have an office in Atlanta, in Boston and in Chicago, you can configure AastraLink trunks between the offices (Figure 4-7).

When AastraLink Pro 160 devices are networked across a LAN/WAN, IP phone users can make calls between the sites by dialing the following:

(prefix digit) + (access digit) + (extension)

Where:

prefix digit = 7 (default)

access digit = 0 - 9 (assigned by the Administrator)

extension = 3 or 4 digit extension number

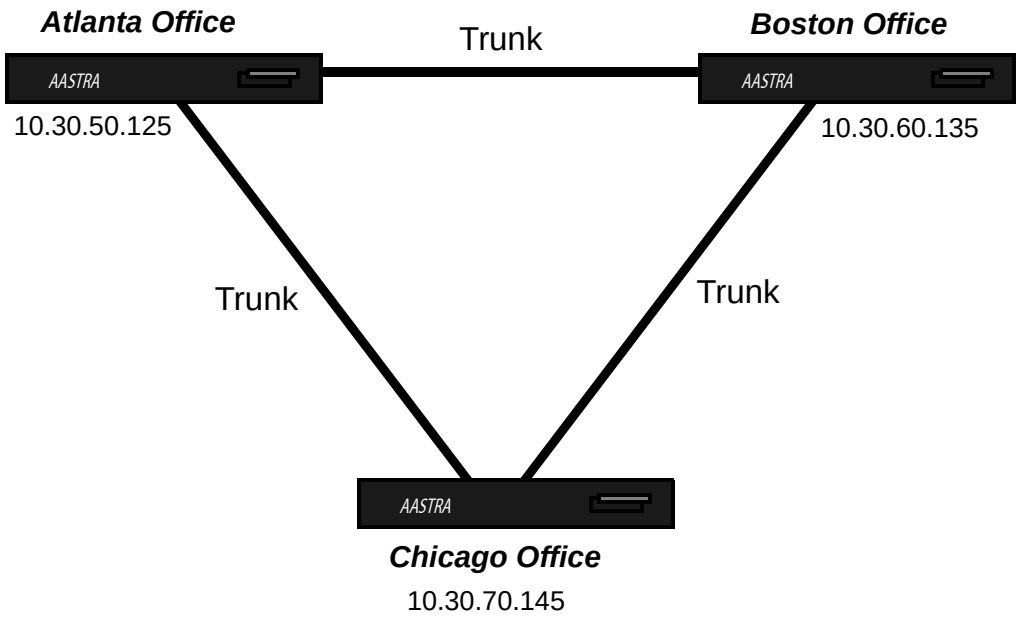


Figure 4-7. AastraLink Trunks Between Atlanta, Boston, and Chicago Offices

Downloaded from www.Manualslib.com manuals search engine

When you enable AastraLink trunking, you assign a unique access digit to each AastraLink device in your network. For example, suppose you assign the access digit **1** to the AastraLink in the Boston office. Then, the dial prefix for the Boston office is as follows:

dial prefix Boston = 7 + 1 + (number)

If you are located in the Atlanta office, and you want to reach extension **200** in the Boston office, you would dial **71200.**

Note: Calls between AastraLink systems support NAT traversal for IAX (AastraLink trunk) calls when used with either a supported UPnP router or with manual port-forwarding.

For networked systems, using 8-prefix AastraLink trunk dialing between sites, the barred number list is also applied locally on each AastraLink Pro for incoming dialed numbers. This allows flexible and secure provisioning rules to be enforced for toll-bypass (i.e. local PSTN breakout) as if the remote system had dialed the number directly from the local system.

Configuration Parameters

The parameters you can specify for AastraLink trunking are:

- **Hostname**

  Specifies the IP address or FQDN of the remote AastraLink.

- **Username**

  Specifies the user name (a simple number string) that you use to access the trunk. For example, 100.

- **Port**

  Specifies the port number of the remote AastraLink on which communications are received. By default this is set to 4569.

Downloaded from www.Manualslib.com manuals search engine

Configuration Guidelines

When you configure AastraLink Pro 160 trunks, note the following guidelines:

- You can configure a maximum of 10 AastraLink trunks and user names on a single AastraLink Pro 160 device.
- You must assign the *same* user name to each end of the trunk.
- AastraLink IP phone network can have the same, or different, dialing plans.
- Currently, global phone directory synchronization between AastraLink Pro 160 devices is not supported. Therefore, users can access phone directories for their local AastraLink IP phone network only.
- AastraLink trunking requires a flat network. The AastraLink devices do not support UPnP operation through a gateway/router/firewall.
- Before you use the Web UI to configure AastraLink trunks, we strongly recommend that you do the following:
  - — Assign an access digit to each AastraLink Pro 160 device in your network.
  - — Make a list of the trunks you want to configure.
  - — Identify the user name for each trunk you are configuring.

AastraLink Trunking Example

For example, suppose the system administrator wants to configure three trunks:

- Atlanta/Boston
- Atlanta/Chicago
- Boston/Chicago

The administrator begins by assigning access digits to each of the AastraLink Pro 160 devices, as shown in the table below:

AastraLink Pro 160	IP address	Access Digit
Atlanta	10.30.50.125	0
Boston	10.30.60.135	1
Chicago	10.30.70.145	2

Downloaded from www.Manualslib.com manuals search engine

The system administrator then assigns a user name to each trunk:

Trunk	User Name
Atlanta - Boston	100
Atlanta - Chicago	101
Boston - Chicago	102

Based on these parameters defined by the administrator, the dial prefix for each AastraLink network in this example is as follows:

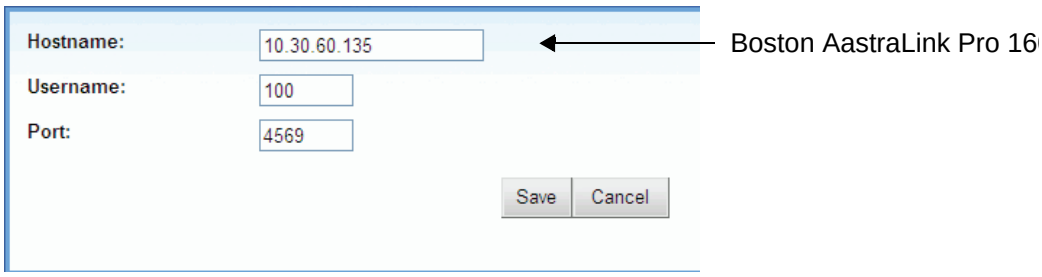
dial prefix Atlanta = 7 + 0 + (number)

dial prefix Boston = 7 + 1 + (number)

dial prefix Chicago = 7 + 2 + (number)

Once the AastraLink trunking information is mapped out, the administrator is ready to configure the trunk between Atlanta and Boston, and does the following steps:

1. Logs into the Atlanta AastraLink device (10.30.50.125).
2. Clicks the dial prefix for the destination end of the trunk. In this case, the Boston AastraLink network: 7 + 1 + (number).
3. Specifies the destination hostname (10.50.60.135) and user name, and then saves the changes.



Downloaded from www.Manualslib.com manuals search engine

The administrator is now ready to configure the other end of the trunk, and does the following steps:

1. Logs into the Boston AastraLink device (10.30.60.135).
2. Clicks the dial prefix for the Atlanta AastraLink network: 7 + 0 + (number).
3. Specifies the destination hostname (10.30.50.125), and the same user name as used for the Boston end of the trunk, then saves the changes.

At this point, the trunk between Atlanta and Boston is complete. To configure the trunk between Atlanta and Chicago, the administrator repeats these steps, using the Chicago dial prefix/hostname as the destination end of the trunk.

Note the following examples:

- Figure 4-8 shows the Atlanta /Boston, and Atlanta /Chicago trunks.
- Figure 4-9 shows the Boston/Atlanta, and Boston /Chicago trunks.
- Figure 4-10 shows the Chicago/Atlanta, and Chicago/Boston trunks.

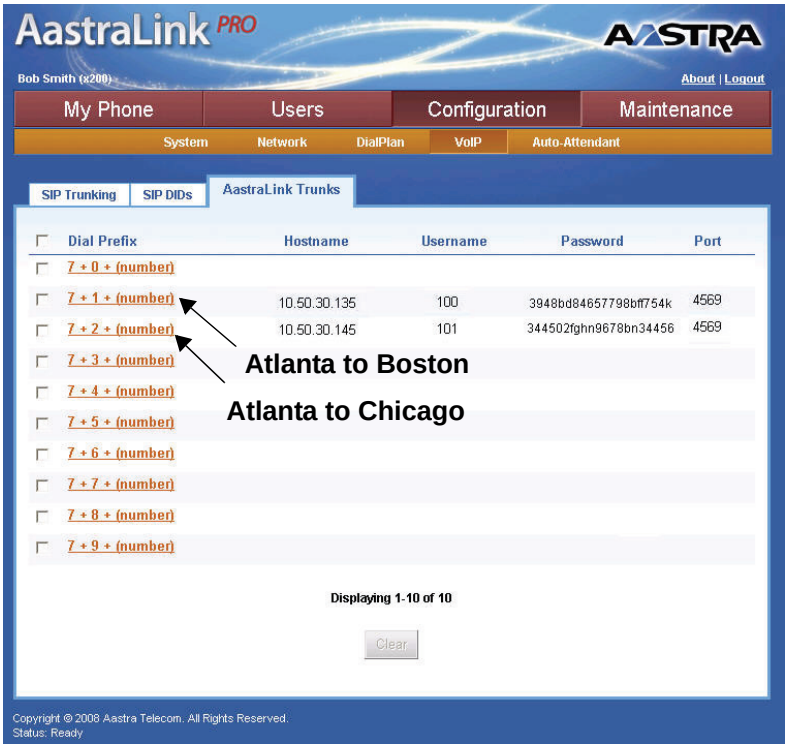


Figure 4-8. Trunks Between Atlanta/Boston and Atlanta/Chicago

Downloaded from www.Manualslib.com manuals search engine

Figure 4-9. Trunks Between Boston/Atlanta and Boston/Chicago

Downloaded from www.Manualslib.com manuals search engine

Figure 4-10. Trunks Between Chicago/Atlanta and Chicago/Boston

Downloaded from www.Manualslib.com manuals search engine

Use the following procedure to enable AastraLink trunking between two AastraLink Pro 160 devices.

AastraLink Web UI

Step	Action
1	Select **Configuration->VoIP->AastraLink Trunks.**
2	Click the **Dial Prefix** that matches the destination AastraLink network. For example, if you are configuring a trunk between Atlanta and Boston, and assigned the access digit 1 to the Boston AastraLink network, then you would click on 7 + 1 + (number).
3	Specify the **Hostname**, or FQDN, of the destination AastraLink device. For example: 10.30.50.135
4	Specify a **Username** for the trunk. The Username is a simple number string that you use to access the trunk. For example: 100.
5	Accept the default **Port** setting of **4569**
6	Click **<Save>** to save your changes. At this point the destination end of the trunk is configured. Now, repeat steps 1 - 6 to configure the other end of the trunk. For example, suppose the trunk is between Atlanta and Boston. You just logged into the Atlanta AastraLink device and configured the trunk from Atlanta (source) to Boston (destination). Now, you need to login to the Boston AastraLink device and configure the trunk from Boston (source) to Atlanta (destination). **Note:** Remember to use an identical Username for both ends of the trunk.

Downloaded from www.Manualslib.com manuals search engine

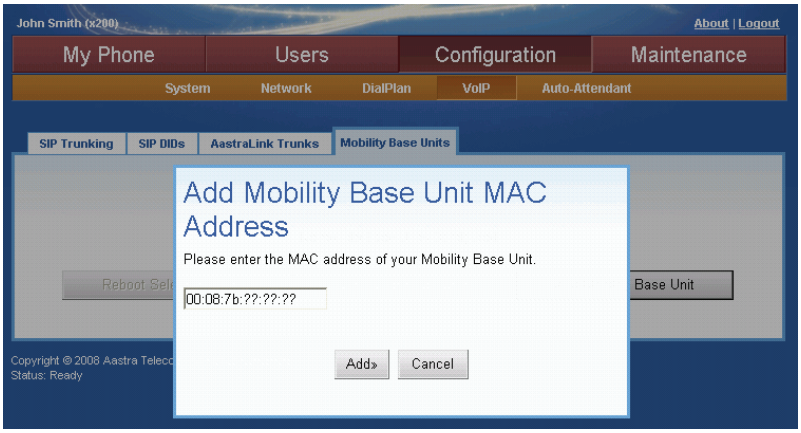
Mobility Base Units (MBUs)

The AastraLink Pro supports the Aastra Mobility Base Unit 400, and the Aastra 420d DECT Handset. You can register up to 8 handsets with each MBU. The MBU supports up to 3 SIP calls simultaneously.

Note: The PSTN port of the MBU is not currently supported when MBU400 is configured by AastraLink - outbound PSTN calls will be routed via the AastraLink FXO ports. The AastraLink does not support the use of the RJ11 FXO interface on the MBU.

Multiple MBU 400 units can be added, identified by MAC address, and then registered to the AastraLink Pro. Each registered handset receives a SIP extension on AastraLink, including Web UI login and voicemail.

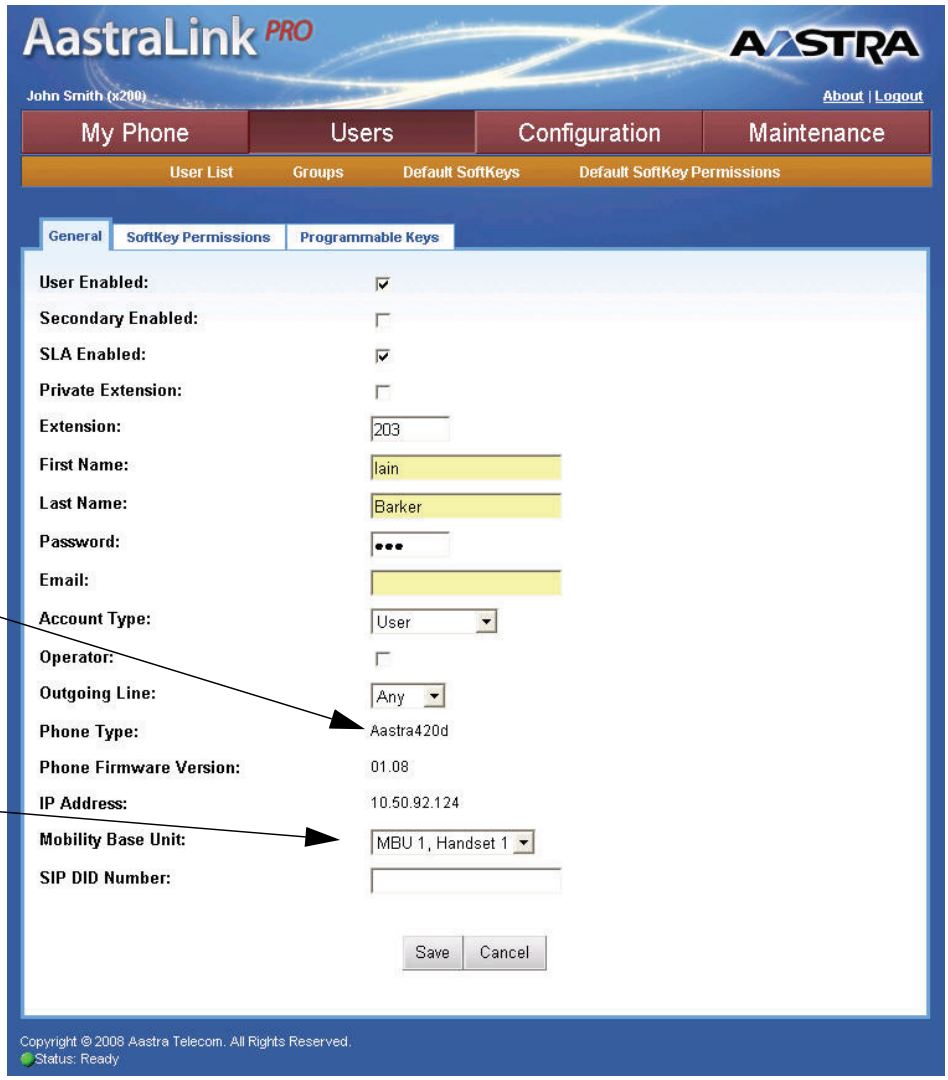
You can add MBU units to the AastraLink Pro using the Web UI at the location, ***Configuration->VoIP->Mobility Base Units.***



Downloaded from www.Manualslib.com manuals search engine

Once an MBU is registered, the administrator can provision extensions for individual handsets by clicking the "**Add Phones**" button at the location, ***Users->User List*** page and select the "**Aastra420d**" phone type.

If one or more MBU is registered, the "**Mobility Base Unit**" drop-down list will show the available handsets (max 8 per MBU) to choose from.



Phone Type is Aastra 420d

Mobility Base Unit field displays available handsets

Downloaded from www.Manualslib.com manuals search engine

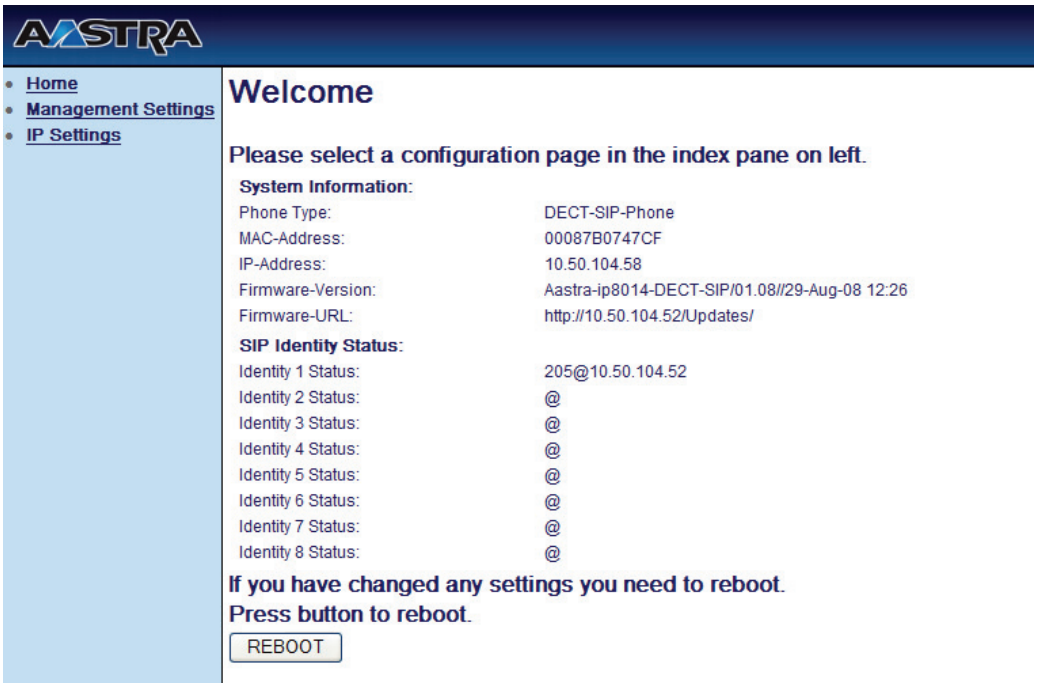
MBU Configuration Download from the AastraLink

The "**User List**" page indicates that an extension is an MBU handset by listing the phone type as "**Aastra420d**". However, handsets will show as disconnected until the handset has registered to the MBU, and the MBU has been provisioned to use AastraLink as its configuration server.

You can set the MBU to receive configuration downloads from the AastraLink Pro by setting the "**Configuration Server Address**" as the IP address of the AastraLink, on the "Management Settings" page, and then rebooting the MBU Refer to the MBU400 documentation for additional details.

Handset Registrations

After adding the MBU and Users in the AastraLink Web UI, provisioning the MBU to use the AastraLink as its configuration server, and rebooting the MBU, the MBU will enter service with 420d handsets registered and ready for use.



The MBU Web UI only shows relevant information for the AastraLink Pro for which it is connected; You can perform all user configuration from the AastraLink Web UI (for example: Call lists, voicemail, call forward, find-me follow-me, etc.).

Downloaded from www.Manualslib.com manuals search engine

For an MBU handset, the "**My Phone**" page looks the same as other phones except there is no "**SoftKeys**" tab (similar to a user with a 51i IP Phone).

Note: The MBU handsets do not support XML, and therefore, cannot be used as an operator extension.

Removing an MBU removes all extensions and handsets that were associated with that MBU, and clears its configuration server association to the AastraLink.

Adding an MBU

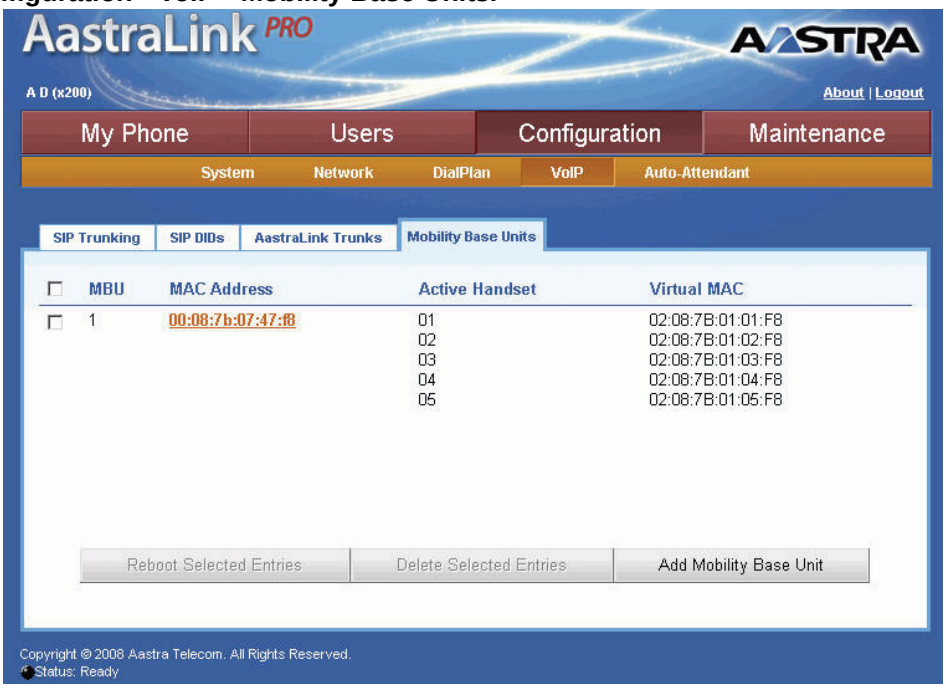
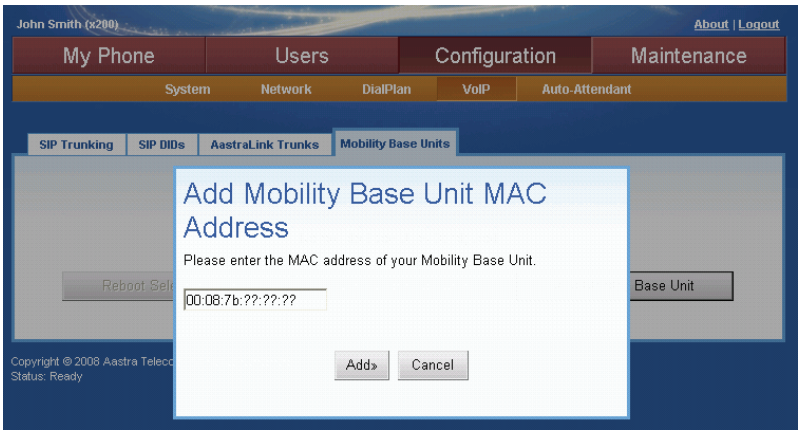
Use the following procedure to add an MBU to the AastraLink Pro network.

AastraLink Web UI

Step	Action
Reset the MBU 400 and register the first DECT 420d handset	
1	Factory defaul the MBU by holding the reset switch for 15 seconds (until all the LEDs come on) then release the switch. When the MBU completes reboot, the I-Net LED flashes.
2	Register your DECT 420d handset to the MBU using the procedures decribed in your MBU 400 Install Guide. The MBU uses DHCP by default to assign it an IP address. The I-Net LED lights up solid ON. If you are using the static IP range rather than DHCP, configure the network settings for the MBU using the MBU 400 Web interface at the location, ***420d Menu Setting->Internet Settings->IP Mode***. Reboot the MBU.
3	Press the <**Volume Up**> key on the side of the registered 420d handset. This displays the MBU network settings (including the MAC address and current IP Address). Make a note of the MAC address and IP address of the MBU.

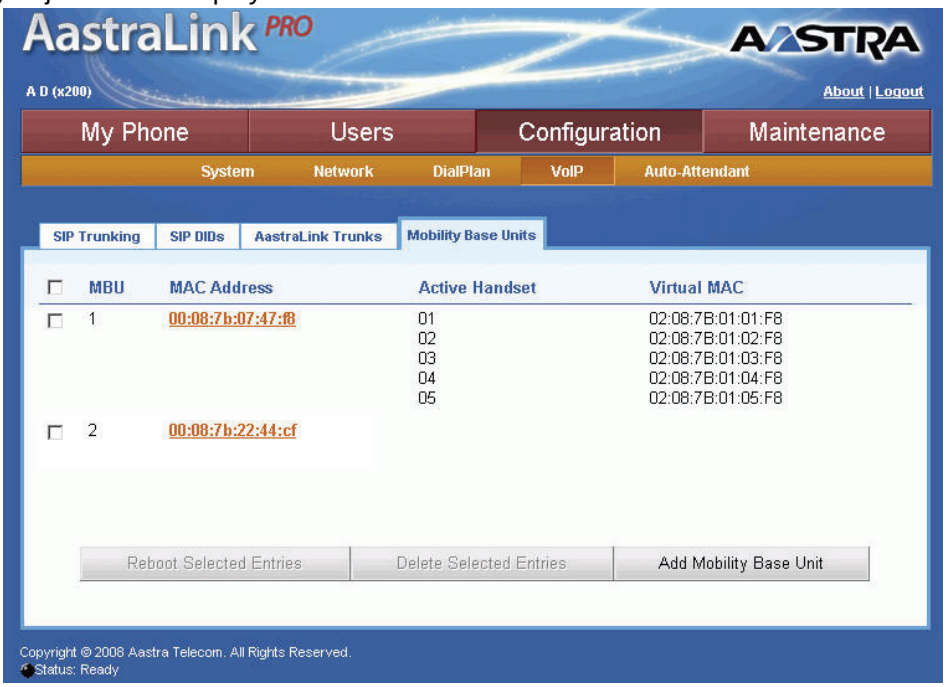
Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
Add the MBU with the registered handset(s) to the AastraLink Pro 160	
4	Select **Configuration->VoIP->Mobility Base Units.** 
5	Click <**Add Mobiliby Base Unit**>. The following prompt displays. 

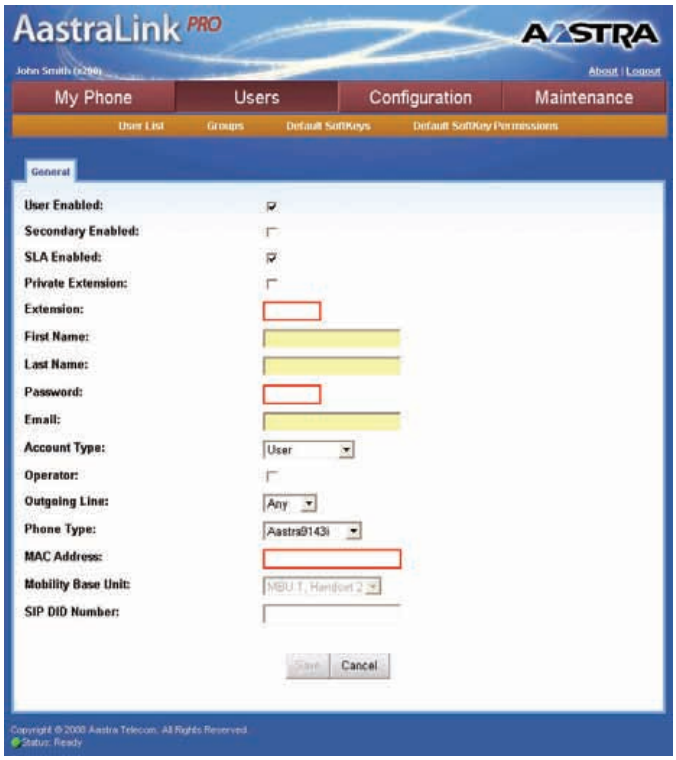
Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
6	Using the MAC address you obtained in step 3, enter the **MAC address** of the MBU in the text box, in colon separated format, and click <**Add**>. For example, **00:08:7B:07:47:CF** The MBU you just added displays in the window. 

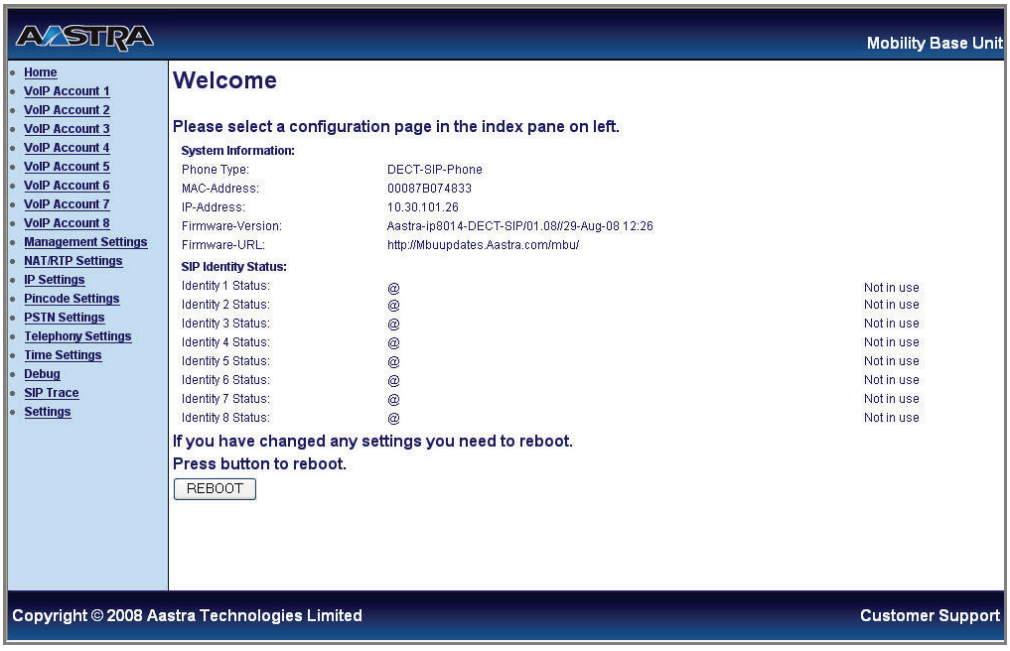
Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
7	For each handset, select **Users**, and click <**Add Phones**>. 
8	Enter values for the following fields: **Extension** (optional) **First Name** (optional) **Last Name** (optional) **Password** (required) **Email** (optional)
9	**DO NOT** enter a MAC address. In the "**Phone Type**" field, select **Aastra420d**.

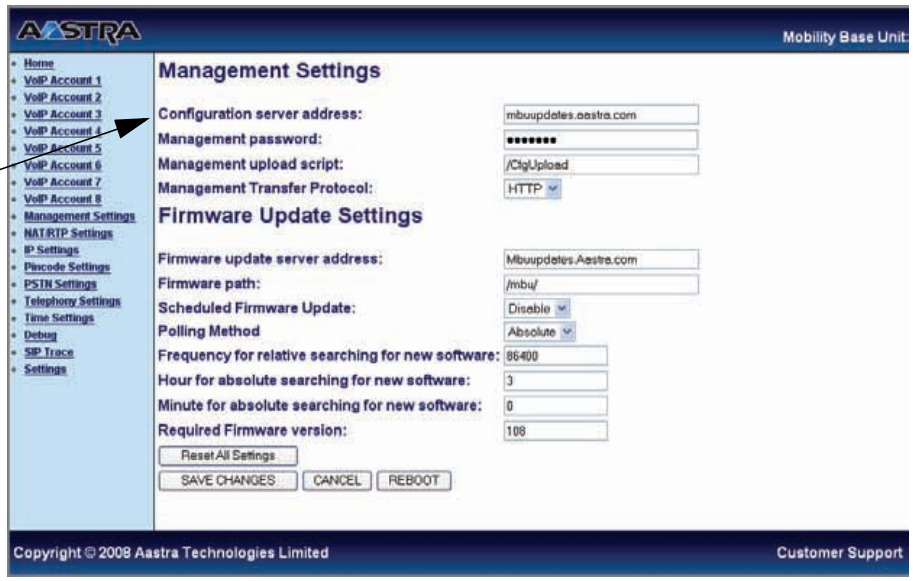
Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
10	In the **"Mobility Base Unit**" field, select the applicable MBU handset. The AastraLink supports multiple MBUs and up to 8 handsets for each MBU so the options in this field are: • MBU x, handset 1 • MBU x, handset 2 • MBU x, handset 3 • MBU x, handset 4 • MBU x, handset 5 • MBU x, handset 6 • MBU x, handset 7 • MBU x, handset 8 **Note:** The handsets do not have to be DECT registered to add them using this field.
11	Login to the MBU Web UI (using the procedures outlined in the MBU Administrator Guide). **Note:** Default MBU User ID is "**admin**" and Password is "**22222**", or whatever Administrator master password has been configured on the AastraLink Pro dialplan page. 
12	Click on **Management Settings**.

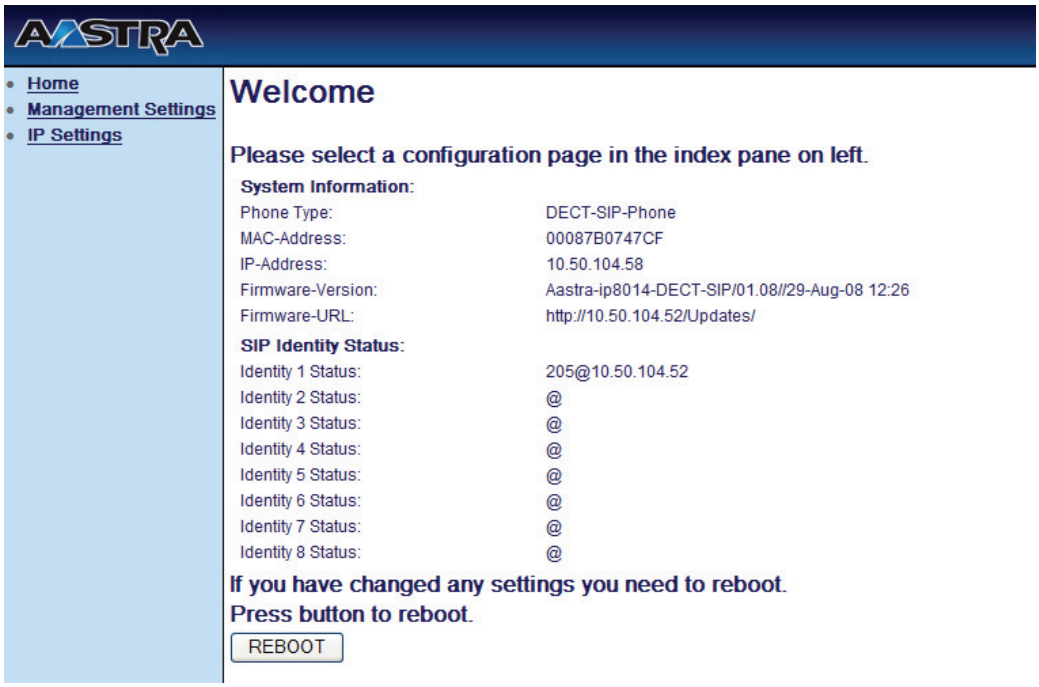
Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
13	In the "**Configuration Server Address**" field, enter the IP Address of the AastraLink Pro for which the MBU is connected, and click <**Save**>.You can get the AastraLinnk Pro IP address in the AastraLink Web UI at the location **Configuration->Network->Current IP Address**. **Configuration Server Address** 

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
14	Reboot the MBU at the prompt. The MBU reboots and downloads its configuration and all registered handsets to the AastraLink. The VOIP LED on the MBU lights up solid when SIP is correctly registered. This may take several minutes. Once the MBU is registered on the AastraLink Pro, you can access the MBU UI by clicking on ***Configuration->VoIP->Mobiliby Base Units***, click on a MAC address of an MBU that is registered, and enter the Admin User ID and Password. The MBU UI displays for that MBU. All registered handsets also display.  **Note:** Registered handsets display a virtual MAC address that was allocated by the AastraLink Pro. For more information about the virtual MAC addresses for DECT 420d handsets, see Chapter 3, the section, “Uploading User Lists if MBU 400s Connected to the AastraLink Pro” on page 3-37.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
15	(optional) If required, you can do an MBU firmware update from the DECT 420d handset. On the 420d handset, press ***Settings->System Settings->Firmware Update***, and select the applicable firmware version from the AastraLink.

Downloaded from www.Manualslib.com manuals search engine

Deleting an MBU

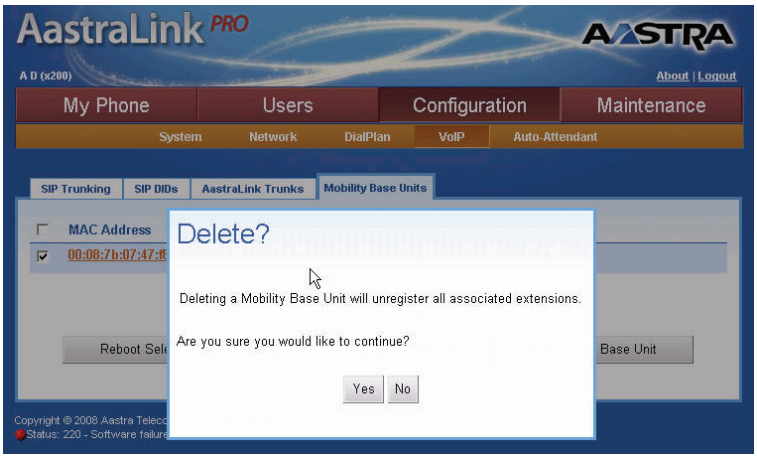
Use the following procedure to delete an MBU from the AastraLink Pro network.

AastraLink Web UI

Step	Action
1	Select **Configuration->VoIP->Mobility Base Units.**

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
2	Place a check mark in the box on the left of the MBU's MAC Address for which you want to delete from the AastraLink Pro, and click <**Delete Selected Entries**>. The following prompt displays. 
3	Click <**Yes**> to delete the MBU from the AastraLink network.

Downloaded from www.Manualslib.com manuals search engine

Rebooting an MBU

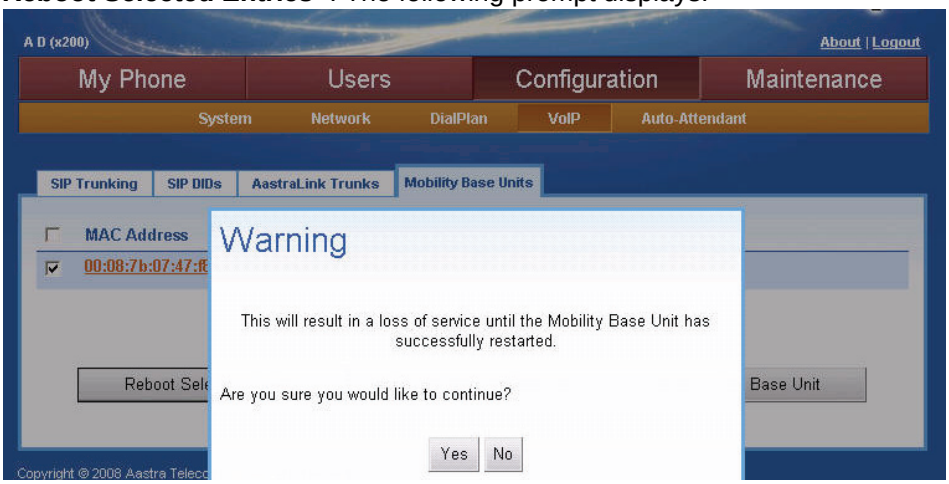
Use the following procedure to reboot an MBU in the AastraLink Pro network.

AastraLink Web UI

Step	Action
1	Select **Configuration->VoIP->Mobility Base Units.**

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
2	Place a check mark in the box on the left of the MBU's MAC Address for which you want to reboot, and click <**Reboot Selected Entries**>. The following prompt displays. 
3	Click <**Yes**> to reboot the selected MBU(s). **Warning**: **Rebooting and MBU results in a loss of service until the Mobility Base Unit has successfully restarted.**

Downloaded from www.Manualslib.com manuals search engine

Configuring Auto-Attendant

You configure Auto-Attendant parameters from the **Configuration->Auto-Attendant** menu shown below. The screen below has no user groups configured on the AastraLink Pro 160.

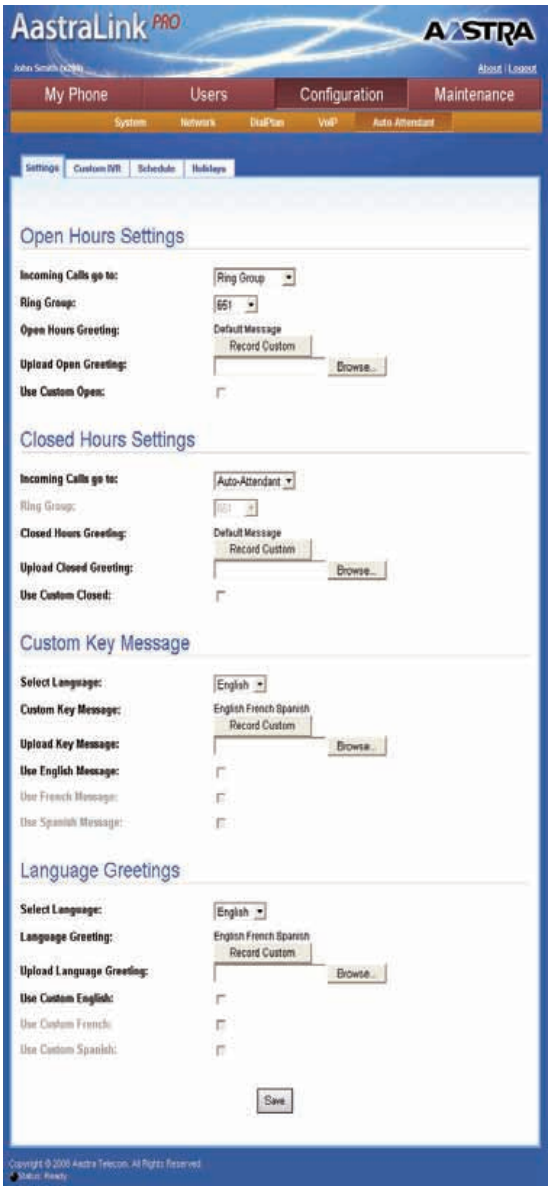


Figure 4-11. Auto-Attendant Menu with No User Groups

Downloaded from www.Manualslib.com manuals search engine

If you have User Groups configured on the AastraLink Pro 160, the Auto-Attendant screen displays as shown below.

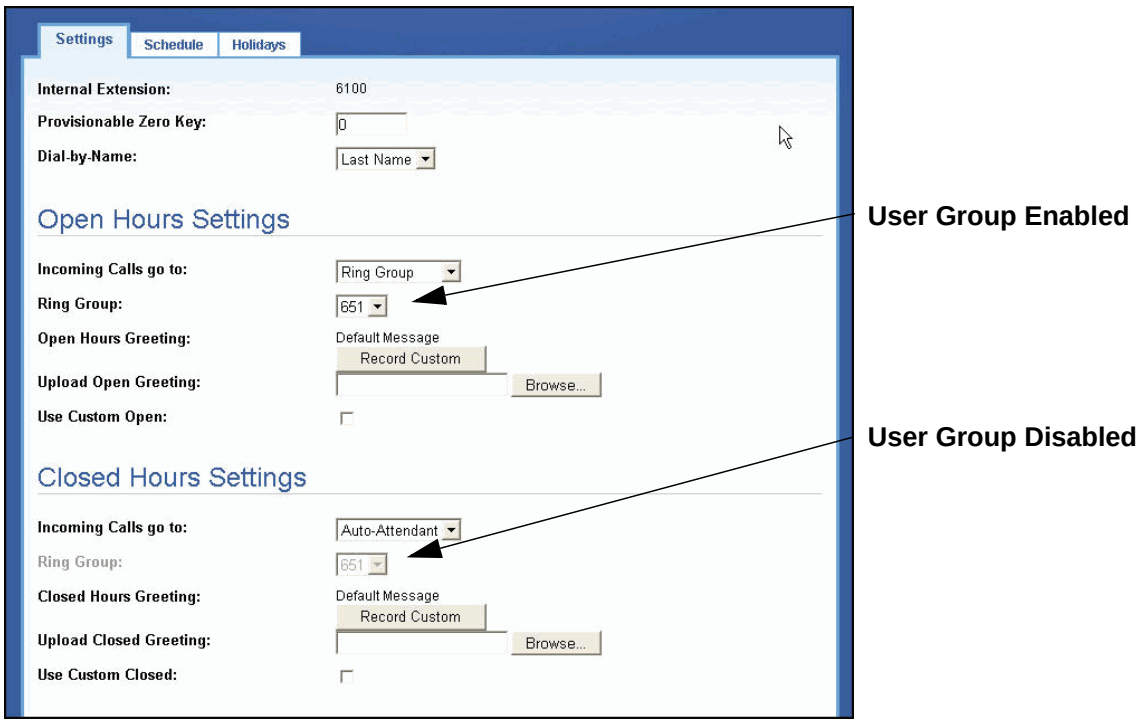


Figure 4-12. Auto-Attendant Menu with User Group

How Auto-Attendant Works

The Auto-Attendant feature allows you to specify how the AastraLink Pro 160 routes incoming calls. That is, you can configure the Auto-Attendant so that incoming calls are received in one of the following ways:

- First by the Auto-Attendant (then by an Operator), or
- First by the Operator (then by the Auto-Attendant), or
- First by a designated user group (then by the Auto-Attendant)

Note: It is possible for a caller to reach the Operator's voicemail account if they are on-duty and do not answer; they can reach the Auto-Attendant using the "Escape to Extension" feature once they have reached the prompts in the Operator's voice mail.

Downloaded from www.Manualslib.com manuals search engine

When callers reach the Auto-Attendant, they are prompted to do one of the following actions:

- Select a language to enable while using Auto-Attendant features (if more than one language is available; default is English)
- Enter the extension of the person they are calling. The Auto-Attendant then transfers the call.
- Dial by name. Depending on the configuration set on the AastraLink Pro, the caller can dial by first name or by last name. If there are multiple listings, the caller is prompted to select from the list. The Auto-Attendant then transfers the call.
- Dial 0 (operator). The Auto-Attendant transfers the call to the operator.

Note: If dial-by-name is disabled, the option is still mentioned in the default main menu announcement. An administrator can record a custom main menu in which they do not mention the feature if they choose to disable it and do not want it announced.

The Auto-Attendant menu displays the following tabs:

- **Settings** - Allows you to configure the Auto-Attendant opened and closed hours, main menu, custom key messages, and language greetings. These parameters also allow you to record custom settings or upload settings if required.
- **Custom IVR** - Allows you to record a custom main menu for the IVR, upload a main menu, dial by first or last name, and specify the single digit keys to use for navigating the IVR system.
- **Schedule** - Allows you to specify the day of the week and the time that the Auto-Attendant is available.
- **Holidays** - Allows you to specify the holidays (by date and time), that the Auto-Attendant is available.

Downloaded from www.Manualslib.com manuals search engine

Settings for the Auto-Attendant

You can configure the following for the Auto-Attendant Settings:

- **Open Hour Settings**
- **Closed Hour Settings**
- **Custom Main Menu**
- **Custom Key Message**
- **Language Greetings** (French, English, or Spanish)

The **Open Hour Settings** and **Closed Hour Settings** allow the administrator to select the hours for which the Auto-Attendant handles calls. These parameters also allow you to record a custom greeting as required. For example, an administrator can record a greeting for incoming calls during open hours and another greeting for closed hours. The administrator has the option of uploading a new custom greeting (***.wav*** file), or using the default greetings.

The **Custom Main Menu** allows the administrator to select the language for the Auto-Attendant to use when it answers a call. These parameters also allow the administrator to record the Main Menu in a specific language and upload language files if required.

The **Custom Key Message** allows the administrator to select the language for the Auto-Attendant to use for a specific message. It also allows the administrator to record a custom message, or upload a message file (***.wav*** file) if required. For example, you could record a message concerning details about the business or other general contact info. The announcement is restricted to the '3' key to keep the Interactive Voice Response (IVR) special-keys contiguous.

The **Language Greetings** allow the administrator to select the language for the greeting when a call comes into the Auto-Attendant. An Administrator can also record a custom language greeting, or upload a language greeting file (***.wav*** file) if required.

Downloaded from www.Manualslib.com manuals search engine

Configuring Settings for the Auto-Attendant

Use the following procedure to specify the Auto-Attendant general settings.

AastraLink Web UI

Step	Action
1	Select **Configuration->Auto-Attendant->Settings**
General Settings	
2	In the "**Provisionable Zero Key**" field, enter the number to which calls are routed when the '**0**' key is pressed from the IVR, by an incoming caller. (Default is zero so that callers are routed to the Operator).
3	In the "**Dial-by-Name**" field, select the method you want the Auto-Attendant to use when an incoming caller needs to dial by name to reach the calling party. Valid values are: • **Disabled** • **Last Name** (default) • **First Name** **Note:** If dial-by-name is disabled, the option is still mentioned in the default main menu announcement. An administrator can record a custom main menu in which they do not mention the feature if they choose to disable it and do not want it announced.
Open Hour Settings	
4	Set the destination for incoming calls in the **"Incoming calls go to"** field to one of the following options: • **Auto-Attendant** ((default) all incoming calls go through the Auto-Attendant). • **Operator** (all incoming calls go to the Operator (if on-duty, goes to the Auto-Attendant if off-duty). • **User Group** (all incoming calls go to a designated user group). **Note:** The "**User Group**" option displays only if you have User Groups configured on the AastraLink.
5	If you select the **User Group** option in step 2, set the virtual extension of the user group in the "**User Group**" field. Skip this step if no User Groups are configured on the AastraLink Pro 160. For more information on virtual extensions, see Chapter 3, the section, "Virtual Extension Numbers (for Ring and Paging Groups)" on page 3-42.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
6	The Auto-Attendant has a built in default greeting that plays during open hours. To specify a custom greeting, do the following: • Click on **<Record Custom>** for the **"Open Hours Greeting"** field. The Operator IP phone rings. Answer the Operator IP phone, and record your custom greeting, as prompted. Refer to *Custom Recordings on* page 4-134 for more information.
7	In the "**Use Custom Open**" field, place a check mark in the box for the Auto-Attendant to use your custom greeting.
8	To upload a greeting file that plays during open office hours, do the following: • Click on **<Browse>** for the **"Upload Open Greeting"** field. Browse to the location on the server where the ***.wav*** file is stored, that contains the greeting you want the Auto-Attendant to use. Click **<Open>**. The file you selected is uploaded to the AastraLink Pro.
9	Click **<Save>** to save your changes.
Closed Hour Settings	
10	Set the destination for incoming calls in the **"Incoming calls go to"** field to one of the following options: • **Auto-Attendant** ((default) all incoming calls go through the Auto-Attendant). • **Operator** (all incoming calls go to the Operator). • **User Group** (all incoming calls go to a designated user group). **Note:** The "**User Group**" option displays only if you have User Groups configured on the AastraLink.
11	If you select the **User Group** option in step 2, set the extension of the user group in the "**User Group**" field. Skip this step if no User Groups are configured on the AastraLink Pro 160.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
12	The Auto-Attendant has a built in default greeting that plays during closed hours. To specify a custom greeting, do the following: • Click on **<Record Custom>** for the **"Closed Hours Greeting"** field. The Operator IP phone rings. Answer the Operator IP phone, and record your custom greeting, as prompted. Refer to *Custom Recordings on* page 4-134 for more information.
13	In the "**Use Custom Closed**" field, place a check mark in the box for the Auto-Attendant to use your custom greeting.
14	To upload a greeting file that plays during closed office hours, do the following: • Click on **<Browse>** for the **"Upload Closed Greeting"** field. Browse to the location on the server where the ***.wav*** file is stored, that contains the greeting you want the Auto-Attendant to use. Click **<Open>**. The file you selected is uploaded to the AastraLink Pro.
15	Click **<Save>** to save your changes.
Custom Main Menu Settings	
16	In the "**Select Language**" field, select the language for which you want to modify the Auto-Attendant Menu items. Valid values are: **English**, **French**, and **Spanish** (default is **English**).
17	The Auto-Attendant has a built in default Main Menu that plays using the system language. To specify a custom Main Menu using English, French, and Spanish, do the following: • Click on **<Record Custom>** for the **"Custom Menu"** field. The Operator IP phone rings. Answer the Operator IP phone, and record your custom Main Menu in each of the languages required (English, French, Spanish), as prompted. Refer to *Custom Recordings on* page 4-134 for more information.
18	In the "**Use English Menu**", "**Use French Menu**", and/or "**Use Spanish Menu**" field(s), place a check mark in the box for the Auto-Attendant to use the custom Main Menu you recorded.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
19	To upload a Main Menu announcement file, do the following: • Click on **<Browse>** for the **"Upload Menu"** field. Browse to the location on the server where the ***.wav*** file is stored, that contains the Main Menu you want the Auto-Attendant to use. Click **<Open>**. The file you selected is uploaded to the AastraLink Pro.
20	Click **<Save>** to save your changes.
Custom Key Message	
21	In the "**Select Language**" field, select the language for which you want to modify the Custom Key Message. Valid values are: **English**, **French**, and **Spanish** (default is **English**).
22	The Auto-Attendant has a built in default key message that plays using the system language. To specify a custom key message using English, French, and Spanish, do the following: • Click on **<Record Custom>** for the **"Custom Key Message"** field. The Operator IP phone rings. Answer the Operator IP phone, and record your custom Key Message in each of the languages required (English, French, Spanish), as prompted. Refer to *Custom Recordings* on page 4-134 for more information.
23	In the "**Use English Message**", "**Use French Message**", and/or "**Use Spanish Message**" field(s), place a check mark in the box for the Auto-Attendant to use the custom Key Messages you recorded.
24	To upload a Key Message announcement file, do the following: • Click on **<Browse>** for the **"Upload Key Message"** field. Browse to the location on the server where the ***.wav*** file is stored, that contains the Key Message you want the Auto-Attendant to use. Click **<Open>**. The file you selected is uploaded to the AastraLink Pro.
25	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

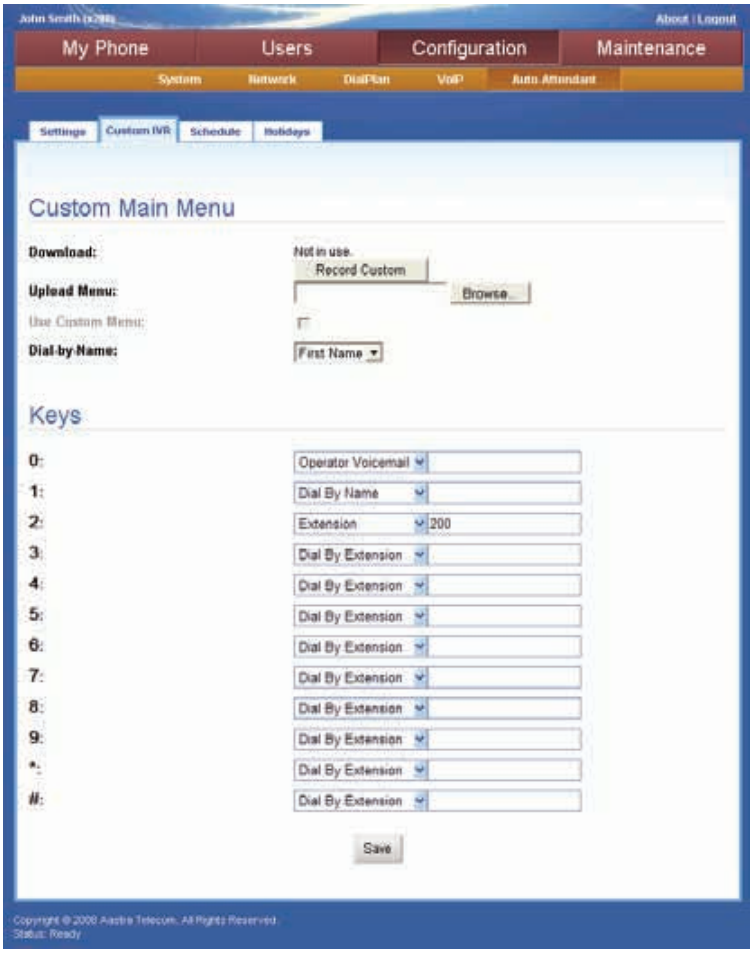
Step	Action
Language Greetings	
26	In the "**Select Language**" field, select the language for which you want to modify the Language Greeting. Valid values are: **English**, **French**, and **Spanish** (default is **English**).
27	The Auto-Attendant has a built in default language greeting that plays using the system language. To specify a custom language greeting using English, French, and Spanish, do the following: • Click on **<Record Custom>** for the **"Language Greeting"** field. The Operator IP phone rings. Answer the Operator IP phone, and record your custom language greeting(s) in each of the languages required (English, French, Spanish), as prompted. Refer to *Custom Recordings on* page 4-134 for more information.
28	In the "**Use Custom English**", "**Use Custom French**", and/or "**Use Custom Spanish**" field(s), place a check mark in the box for the Auto-Attendant to use the custom language greetings you recorded.
29	To upload a language greeting announcement file, do the following: • Click on **<Browse>** for the **"Upload Language Greeting"** field. Browse to the location on the server where the ***.wav*** file is stored, that contains the language greeting(s) you want the Auto-Attendant to use. Click **<Open>**. The file you selected is uploaded to the AastraLink Pro.
30	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Custom Interactive Voice Response (IVR)

The AastraLink Pro allows you to press a single digit on your phone's keypad (0 through 9, *, or #) when navigating the Auto-Attendant Menu in the IVR.

After the Administrator has recorded/uploaded a custom menu announcement, you can configure a single digit key to match that announcement using the Web UI at the location, ***Configuration->Auto-Attendant->Custom IVR***.



Downloaded from www.Manualslib.com manuals search engine

Custom IVR Configuration

When custom IVR menu is enabled, you can configure any single-digit key on the standard DTMF phone keypad to be used like a speeddial, to immediately perform any of the following in the Auto-Attendant menu:

- Dial by Name
- Dial by Extension
- Play another custom greeting
- Ring admin configured number for that key
- Go to Operator voicemail
- Go to voicemail access
- Replay the menu
- Unused/Empty (plays the key number and runs invalid key handler)

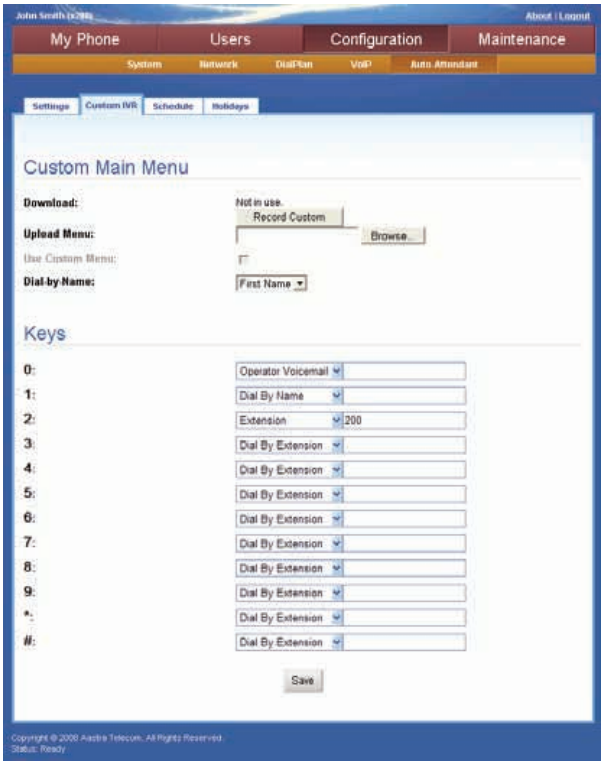
From this screen, you can also select whether to **disable** "Dial-by-Name", dial by **First Name**, or dial by **Last Name**.

Downloaded from www.Manualslib.com manuals search engine

Configuring a Custom IVR

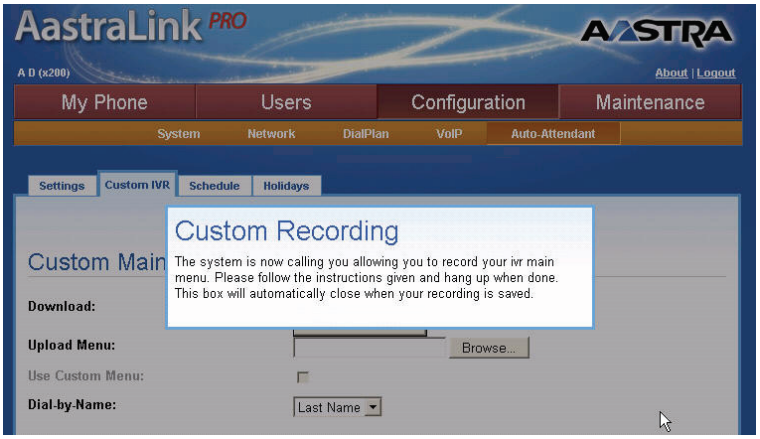
Use the following procedure to customize the your IVR system.

AastraLink Web UI

Step	Action
1	Select **Configuration->Auto-Attendant->Custom IVR.** 

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
2	To record a custom greeting to use when a caller first accesses the IVR system, click <**Record Custom**>. The following prompt displays.  The system proceeds to call you allowing you to record your IVR main menu. Follow the instructions given and hang up when done. This prompt automatically closes when your recording is saved.
3	To upload a custom IVR mneu, place the cursor in the "**Upload Menu**" text box, and click <**Browse**> to locate the custom menu you want to upload to the AastraLink.
4	In the "**Dial-by-Name**" field, select how you want the IVR to handle how a caller dials a User in the network. Valid values are: • **First Name** • **Last Name** • **Disabled** (Default)

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
5	In the "**Keys**" section, select the keys (from 0 to 9, *, and #) that you want a caller to use when navigating the IVR. For each key, select the function of that key from the drop down box. Valid values are: • **Dial by Name** • **Dial by Extension** • **Play another custom greeting** • **Ring admin configured number for that key** • **Go to Operator voicemail** • **Go to voicemail access** • **Replay the menu** • **Unused/Empty** (plays the key number and runs invalid key handler)
6	Depending on the key function you selected in step 5, enter a phone number or extension for the key.
7	Click <**Save**> to save the custom IVR settings.

Downloaded from www.Manualslib.com manuals search engine

Schedule for the Auto-Attendant

By default, the Auto-Attendant hours are set to open at 9:00 A.M. and close at 5:00 P.M for the business days of Monday through Friday. Saturday and Sunday are closed hours. Calls that come into the Auto-Attendant during these times are handled according to the configuration set by the administrator in the Auto-Attendant Menus.

You can schedule specific open and closed hours of operation on any of the seven days of the week. You can also select any hour of the day or night when creating the open and closed schedule for the Auto-Attendant.

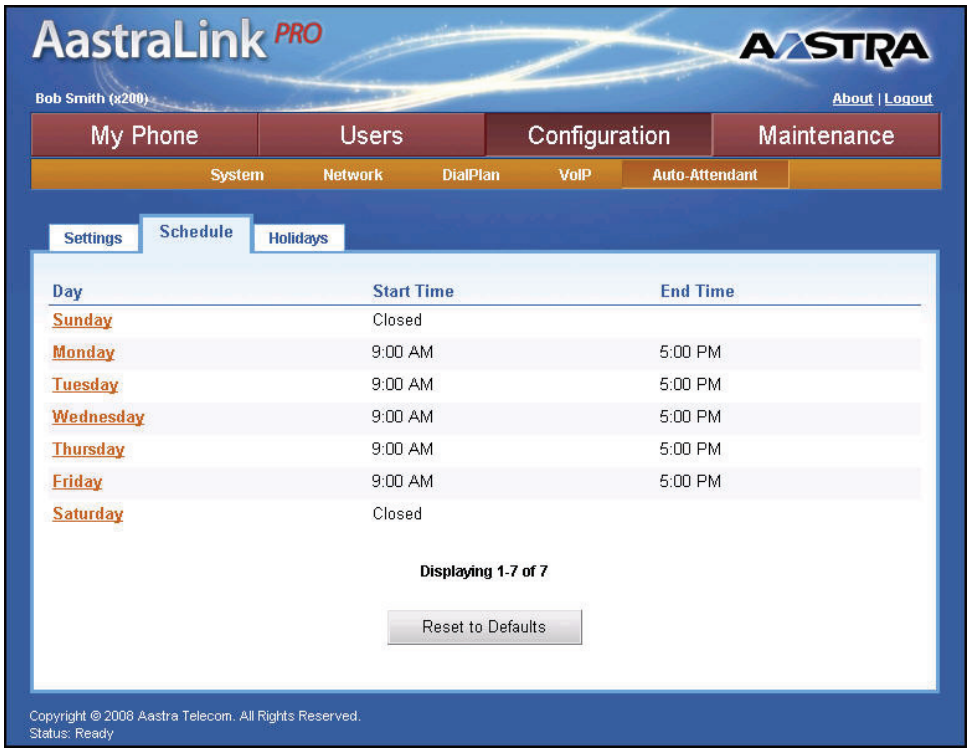


Figure 4-13. Auto-Attendant Schedule (days)

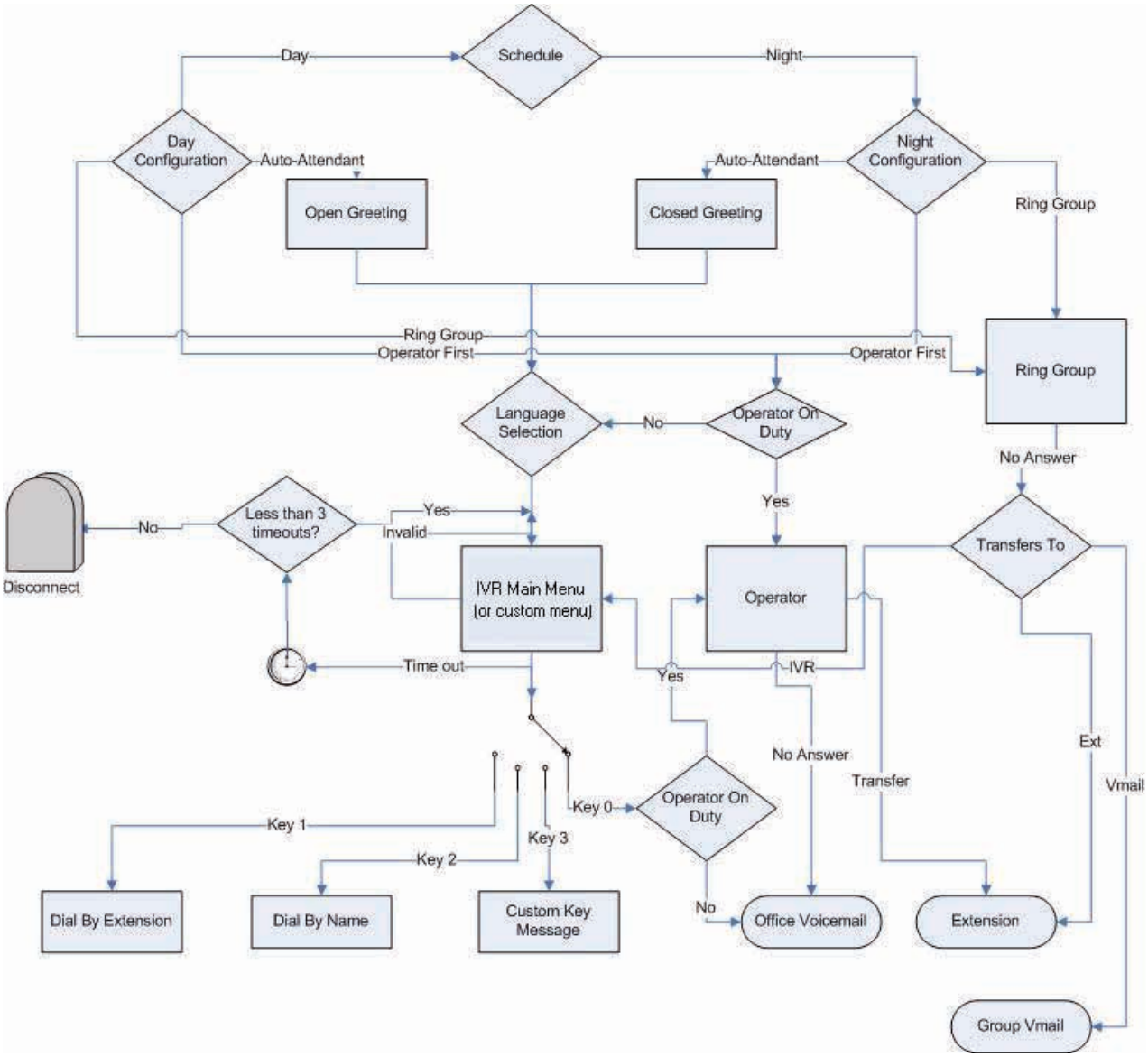
You can reset the default settings for the Auto-Attendant schedule any time by clicking the <**Reset to Defaults**> button on the Auto-Attendant Schedule (days) screen (see illustration above).

Downloaded from www.Manualslib.com manuals search engine

Figure 4-14. Auto-Attendant Schedule (times)

Downloaded from www.Manualslib.com manuals search engine

The following illustration shows the scheduling flow in the Auto-Attendant.



Downloaded from www.Manualslib.com manuals search engine

Use the following procedure to specify the Auto-Attendant schedule.

AastraLink Web UI

Step	Action
1	Select **Configuration->Auto-Attendant->Schedule**
2	To begin editing the Auto-Attendant schedule, click on one of the days of the week. For example, click **<Sunday>**
3	Set the **"Day"** field to the day of the week you are configuring.
4	If the office is closed this day, then in the "**Closed**" field, place a check mark in the box and click **<Save>**. You disable the **"Closed"** field by unchecking the box.
5	If the office is open this day, do the following ("Closed" field must be unchecked): • Set the **"Open At"** field to the correct time when the office opens, and set AM or PM as appropriate. • Set the **"Close At"** field to the correct time when the office closes, and set AM or PM as appropriate.
6	Click **<Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Holidays for the Auto-Attendant

By default, there are no holidays scheduled in the Auto-Attendant. Holidays are treated as days during which the regular schedule should be overridden with a custom setting for open/closed hours. You can schedule specific days and times for your office holidays if required. You schedule holidays by entering the holiday name, date, and times, or by specifying the holiday name, date, and "**Closed**", if your office is closed on this holiday.

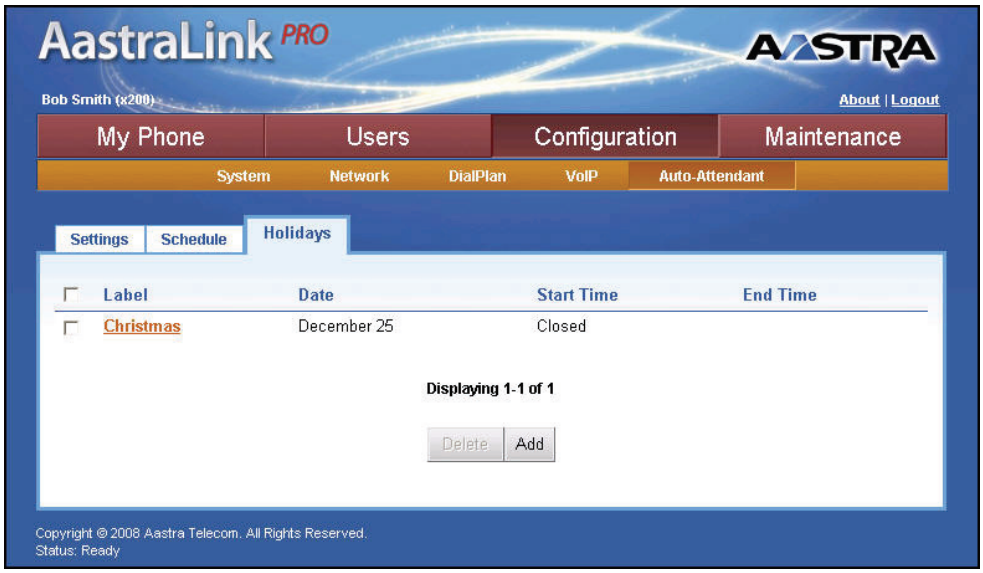


Figure 4-15. Auto-Attendant Holidays

Downloaded from www.Manualslib.com manuals search engine

Figure 4-16. Specifying Auto-Attendant Holidays

Note: Holidays are assumed to have annual repetition (i.e. most secular calendar holidays in USA) so are essentially configured as repeating every 12 months. Where holidays repeat on irregular dates - usually due to religious or pagan cycles. For example, the Christian holiday of Good Friday occurs on a Pagan cycle with no fixed annual repeat (actually the friday before the first Sunday after the first fourteenth day cycle of the moon on or after the vernal equinox) - it is necessary to maintain the list manually for each new year.

Downloaded from www.Manualslib.com manuals search engine

Adding a Holiday to the Auto-Attendant

Use the following procedure to add a holiday to the Auto-Attendant schedule.

AastraLink Web UI

Step	Action
1	Select **Configuration->Auto-Attendant->Holidays**
2	Click **<Add>.**
3	Specify a name for the holiday in the "**Holiday Name"** field. For example, **Christmas.**
4	Select the date for the holiday in the **"Date"** field. For example, **25 December.**
5	If the office is closed this day, then in the "**Closed**" field, place a check mark in the box and click **<Save>**. You disable the **"Closed"** field by unchecking the box.
6	If the office is open this day, do the following ("Closed" field must be unchecked): • Set the **"Open At"** field to the correct time when the office opens. • Set the **"Close At"** field to the correct time when the office closes.
7	Click **<Save>** to save your changes.

Deleting a Holiday from the Auto-Attendant

Use the following procedure to add a holiday to the Auto-Attendant schedule.

AastraLink Web UI

Step	Action
1	Select **Configuration->Auto-Attendant->Holidays**
2	Select the holiday that you want to delete by placing a check mark in the box before that holiday. To select all holidays, place a check mark in the box for the "**Label**" field.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
3	Click **<Delete>** to delete the holiday(s) you selected. The following prompt displays: "*Are you sure you want to delete the selected items?*"
4	Click **<Yes>** to delete the holiday(s) you selected.

Downloaded from www.Manualslib.com manuals search engine

Custom Recordings

You can create custom recordings (for open and closed hours, Main Menus, Key Messages, Language Greetings) for the Auto-Attendant if required. You can also create a custom recording for the custom Main Menu. Incoming callers hear these custom recordings when accessing and using the Auto-Attendant. For example, you may want to include your company name in the open office greeting. Another example of when you may want to record a custom greeting message is during a holiday period, when your office is closed.

Custom Auto-Attendant announcements are heard by any incoming SIP trunk or IAX trunk call that reaches the Auto-Attendant, as well as by any internal SIP extension who dials 6100 to reach the IVR (though the caller does not receive the language selection as they have already configured one for their phone). When callers dial into the Auto-Attendant from the local IP phone network, they directly access the Auto-Attendant menus.

You can record custom recordings in the applicable language using the Operator IP phone, or you can upload a custom recording file to the AastraLink Pro. The first extension (200) registered with the IP phone becomes the Operator by default.

Note: Make sure you can access the Operator IP phone before starting the procedure described below.

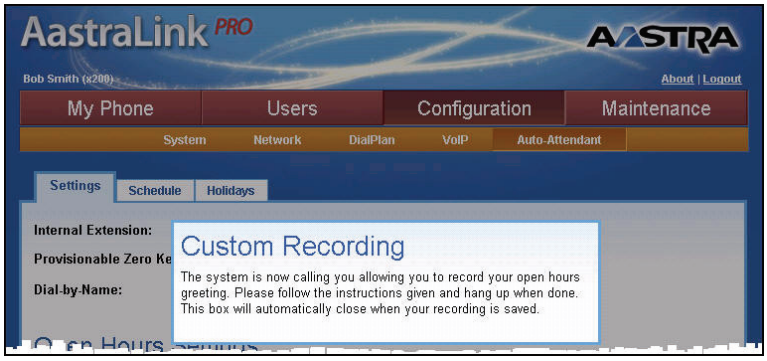
Use the following procedure to specify a custom recording.

AastraLink Web UI

Step	Action
1	Select **Configuration->Auto-Attendant->Settings**
2	In the "**Language Greetings**" section, select the language you want to use for your custom recording (English, French,or Spanish). Default is English.

Downloaded from www.Manualslib.com manuals search engine

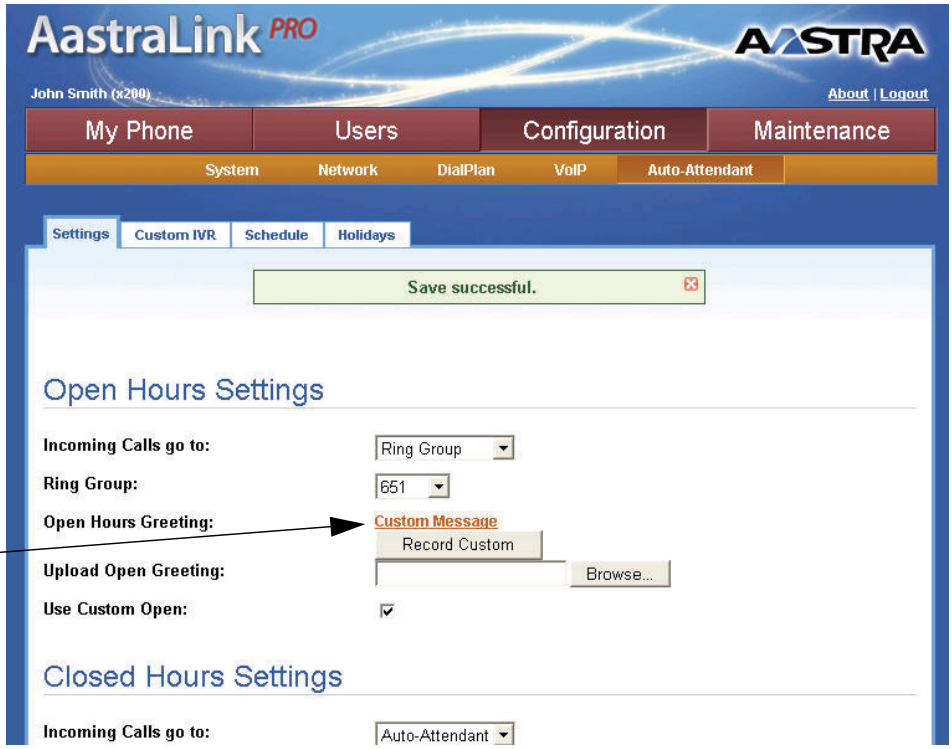
AastraLink Web UI

Step	Action
Custom Recordings Using the IP Phone	
3	To specify a custom recording, click on **<Record Custom>** for the applicable section on the "**Settings**" tab (Open Hour Settings, Closed Hour Settings, Custom Key Message, or Language Greetings), or the **<Record Custom>** on the "**Custom IVR**" tab for Custom Main Menu. The Web UI displays a window informing you that the recording process has begun. (The window disappears when the process is complete.) 
4	When the Operator IP phone rings, pick up handset.
5	After you hear the tone, speak into the Operator IP phone and record your custom greeting, Main Menu, key message, or language greeting. Press **<#>** when you are finished recording.
6	As prompted by your Operator IP phone, do one of the following: • To re-record the message, press **<1>.** • To hear the message you just recorded, press **<2>.** • To save the message, and use it as the Auto-Attendant custom greeting, press **<3>.**

Downloaded from www.Manualslib.com manuals search engine

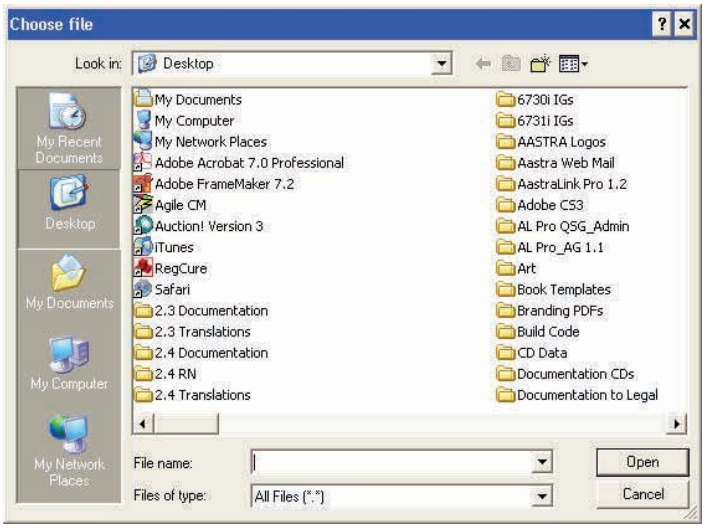
AastraLink Web UI

Step	Action
7	Click **<Save>** to save the recording. The following example shows a recording applied to the Open Hours Settings.



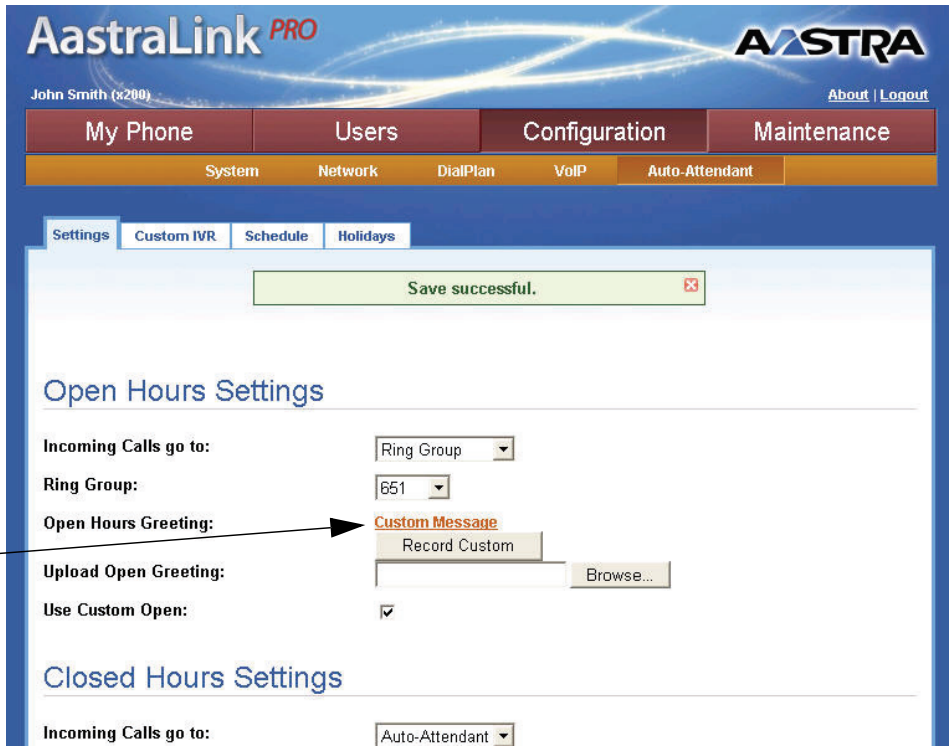
Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
Uploading a Custom Recordings File	
1	Select **Configuration->Auto-Attendant->Settings**
2	In the "**Language Greetings**" section, select the language you want to use for your custom recording (English, French,or Spanish). Default is English.
3	To upload a custom recording file, click on **<Browse>** for the applicable section on the "**Settings**" tab (Open Hour Settings, Closed Hour Settings, Custom Key Message, or Language Greetings), or the **<Browse>** on the "**Custom IVR**" tab for Custom Main Menu. The browse window displays for your PC. 

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
4	Navigate to the directory location on your PC that contains the custom recording file you created, select the applicable ".wav" file and click <Open>. The path name is inserted in the "**Upload Greeting**" field. **Note:** Custom recording files must be created with a recording application and be saved to a file with the ***.wav*** extension (for example AastraMainMenu.wav).
5	Click **<Save>** to save the recording. The following example shows a recording applied to the Open Hours Settings. **Custom Message Applied** 

Downloaded from www.Manualslib.com manuals search engine

Chapter 5
Maintaining the AastraLink Pro 160

About this Chapter

Introduction

This chapter describes how to maintain the AastraLink Pro 160.

Topics

This chapter covers the following topics:

Topic	Page
Accessing the Maintenance Menu	page 5-3
Viewing the Current System Status	page 5-4
Managing Call Detail Records (CDR reports)	page 5-5
Sorting CDR Columns	page 5-7
Viewing Call Detail Records	page 5-9
Downloading CDR Reports	page 5-9
Performing AastraLink Backup and Restore Tasks	page 5-10
Backup and Restore Guidelines	page 5-11
Backing Up AastraLink System Software	page 5-12
Restoring the AastraLink Configuration Database and Voicemail	page 5-14
Updating AastraLink System Software	page 5-15
Automatic Updates	page 5-17
Manual Updates	page 5-18

Downloaded from www.Manualslib.com manuals search engine

About this Chapter

Topic	Page
Support Information	page 5-21
Send Email to Aastra Support with Debug Reports	page 5-21
General Support	page 5-24

Downloaded from www.Manualslib.com manuals search engine

Accessing the Maintenance Menu

You access all system maintenance and upgrade options for the AastraLink Pro 160 from the **Maintenance** menu (Figure 5-1).

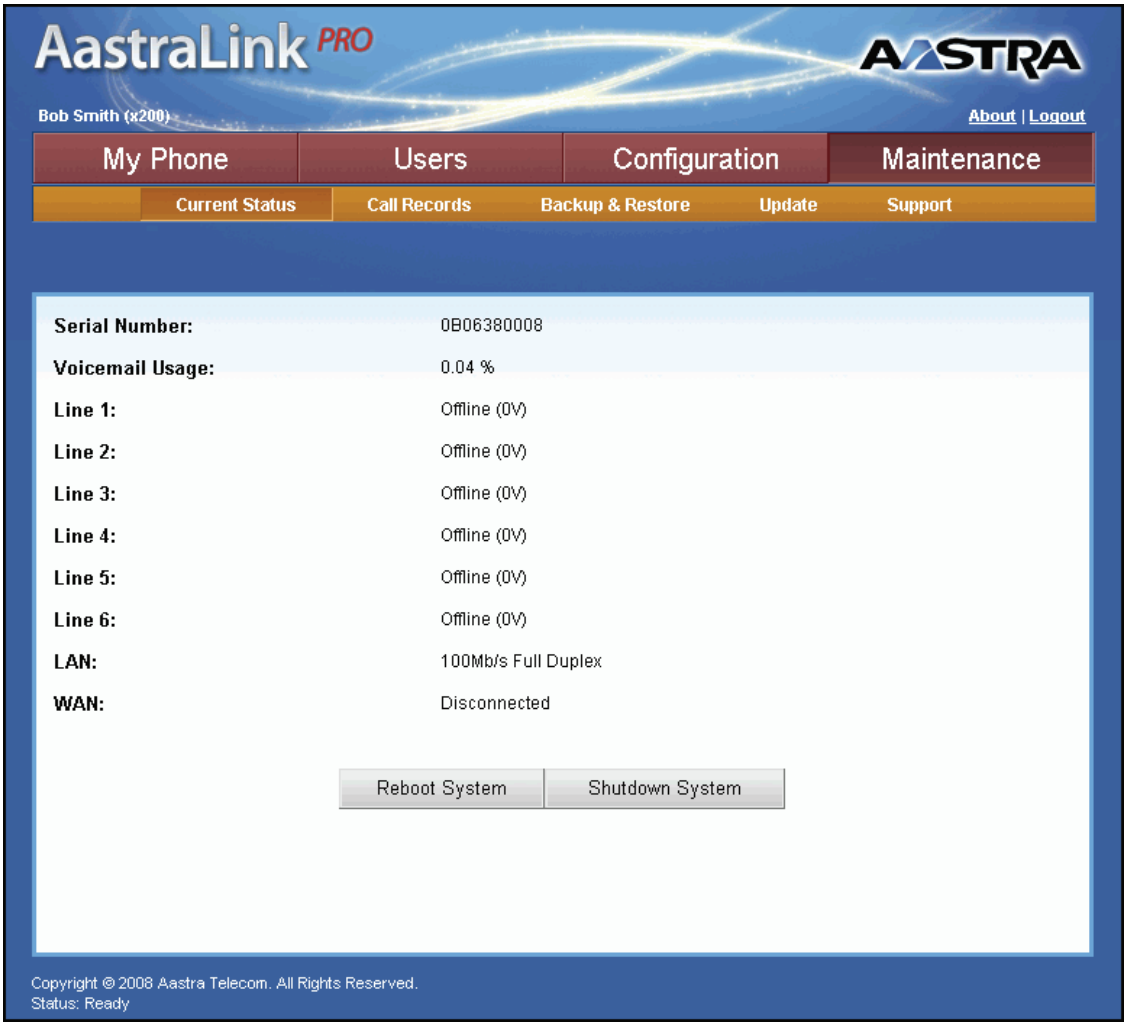


Figure 5-1. AastraLink Pro 160 Web UI Maintenance Menu

Downloaded from www.Manualslib.com manuals search engine

Viewing the Current System Status

You view the current system status for the AastraLink Pro160 from the **Maintenance->Current Status** menu (Figure 5-1)**.**

The current status menu contains the following information about the AastraLink Pro 160:

- Serial Number of the AastraLink Pro 160
- Percent of Voicemail usage
- Line 1 through Line 6 shows the status of each FXO line.
  - If the line is connected and receiving voltage from the telephone network, the status is "**Available**."
  - If the line is disconnected, the status is "**Offline**."
  - If the line is off-hook, the status is "**In Use**." This status is an interactive link that, when clicked, allows the Administrator to disconnect the FXO line manually. It forces a hang-up of the line and clears any active calls.
- Link connection mode and speed for the LAN and WAN. Displays "**Disconnected**" if no LAN or WAN connection available.

The Current Status screen also allows you to reboot the AastraLink Pro system and all of the connected phones, or shut down the entire system.

Downloaded from www.Manualslib.com manuals search engine

Managing Call Detail Records (CDR reports)

About the Call Records Menu

You view the Call Detail Record (CDR) history for the AastraLink Pro 160 from the **Maintenance->CDR Reports** menu (Figure 5-2).

The CDR logs include all regular calls, feature activations, and internal calls.

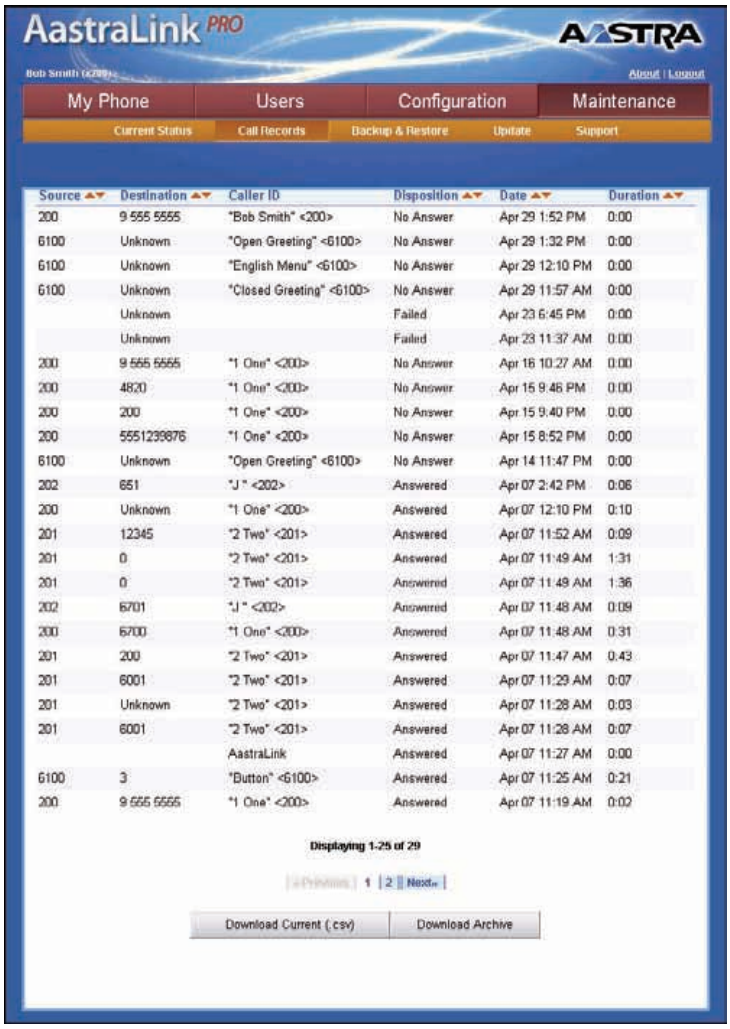

AastraLink PRO
AASTRA
About | Logout
My Phone
Users
Configuration
Maintenance
Current Status
Call Records
Backup & Restore
Update
Support
Source
Destination
Caller ID
Disposition
Date
Duration
200 9 555 5555 "Bob Smith" <200> No Answer Apr 29 1:52 PM 0:00
6100 Unknown "Open Greeting" <6100> No Answer Apr 29 1:32 PM 0:00
6100 Unknown "English Menu" <6100> No Answer Apr 29 12:10 PM 0:00
6100 Unknown "Closed Greeting" <6100> No Answer Apr 29 11:57 AM 0:00
Unknown Failed Apr 23 6:45 PM 0:00
Unknown Failed Apr 23 11:37 AM 0:00
200 9 555 5555 "1 One" <200> No Answer Apr 16 10:27 AM 0:00
200 4820 "1 One" <200> No Answer Apr 15 9:46 PM 0:00
200 200 "1 One" <200> No Answer Apr 15 9:40 PM 0:00
200 5551239876 "1 One" <200> No Answer Apr 15 8:52 PM 0:00
6100 Unknown "Open Greeting" <6100> No Answer Apr 14 11:47 PM 0:00
202 651 "J " <202> Answered Apr 07 2:42 PM 0:06
200 Unknown "1 One" <200> Answered Apr 07 12:10 PM 0:10
201 12345 "2 Two" <201> Answered Apr 07 11:52 AM 0:09
201 0 "2 Two" <201> Answered Apr 07 11:49 AM 1:31
201 0 "2 Two" <201> Answered Apr 07 11:49 AM 1:36
202 6701 "J " <202> Answered Apr 07 11:48 AM 0:09
200 6700 "1 One" <200> Answered Apr 07 11:48 AM 0:31
201 200 "2 Two" <201> Answered Apr 07 11:47 AM 0:43
201 6001 "2 Two" <201> Answered Apr 07 11:29 AM 0:07
201 Unknown "2 Two" <201> Answered Apr 07 11:28 AM 0:03
201 6001 "2 Two" <201> Answered Apr 07 11:28 AM 0:07
AastraLink Answered Apr 07 11:27 AM 0:00
6100 3 "Button" <6100> Answered Apr 07 11:25 AM 0:21
200 9 555 5555 "1 One" <200> Answered Apr 07 11:19 AM 0:02
Displaying 1-25 of 29
1 | 2 | Next...
Download Current (.csv)
Download Archive

Figure 5-2. Call Records Menu

Downloaded from www.Manualslib.com manuals search engine

The following table described the information in each call detail record.

Column	Description
Source	Source directory number
Destination	Destination directory number (in some cases, includes line type, i.e., SIP)
Caller ID	Calling name of the originator (if known)
Disposition	Result of the call, or the feature method used (i.e., whether the call was answered, not answered, busy, or if the call failed).
Date	Date of the call
Duration	Amount of time that lapsed from when the call was dialed to when the call was terminated.

The "**Call Records**" page displays the current master "***.csv***" file contents. The call records list is paginated into 25-block records. The "***.csv***" file rotates daily when it reaches 200KB in size. Records that are rotated out do not display on the "**Call Records**" page, but can still be downloaded from the Web UI by clicking the **<Download Current (.csv>)>** button. After 4 weeks, the AastraLink Pro deletes the files from the file system that have not been downloaded.

The **<Download Archive>** button collates the "***.csv***" files into a single "***tar.gz***" archive file and downloads the "***.gz***" file to a location you specify.

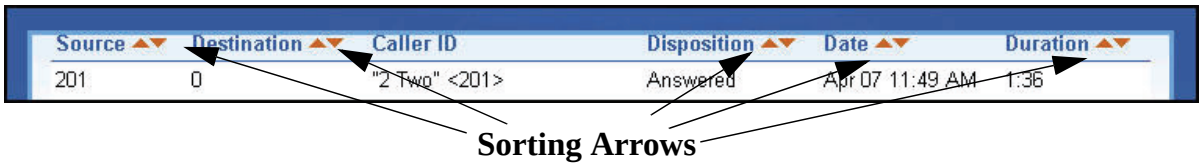
Note: To avoid exhausting memory during the "Download Archive" task, only the first 10 *.csv* files (i.e., 2MB) are included in the download. If the system is particularly busy, more than 10 files (or 2MB) of records can be created in the 4-week rotation window. You cannot download older files that have been deleted after the 4-week expiry.

It is recommended to download call records on a timely and frequent basis.

Downloaded from www.Manualslib.com manuals search engine

Sorting CDR Columns

In the Call Detail Record report, you can sort each column using the up and down arrows at the top of each column.



The following table describes the sorting process for each column.

Column	Sort Process	
	UP Arrow	**DOWN Arrow**
Source	Sorts in ascending order. For example: UnKnown <Blank> 200 201 202	Sorts in descending order. For example: 202 201 200 <Blank> Unknown
Destination	Sorts in ascending order. For example: Unknown 205 206 302 3345454 4443567	Sorts in descending order. For example: 4443567 3345454 302 206 205 Unknown
Caller ID	No sorting; the items in this column stay with each record as you sort.	
Disposition	Sorts by: Answered, Failed, No Answer	Sorts by: No Answer, Failed, Answered

Downloaded from www.Manualslib.com manuals search engine

Column	Sort Process	
Date	Sorts in ascending order. For example: Apr 7 10:51 AM Apr 7 11:42 AM May 4 2:30 PM	Sorts in descending order: For example: May 4 2:30 PM Apr 7 11:42 AM Apr 7 10:51 AM
Duration	Sorts in ascending order. For example: 00:00 00:00 00:32 01:43	Sorts in descending order. For example: 01:43 00:32 00:00 00:00

Note:

1. When sorting in the CDR report, the sort uses data from the current report that may appear on more than one page. For example, if a CDR report is large enough to appear on four pages, the data on all four pages is sorted when you click on the UP and DOWN sort arrows.

2. Call logs cannot manually be deleted, but are automatically expired from the CompactFlash after log rotate limits are reached. Default limits for CDR logs are to check dial and rotate after 200kb file size is reached, at which point logging resumes in a new blank log file. Log files are retained for a maximum of four weeks before auto-deletion to reclaim storage space.

Downloaded from www.Manualslib.com manuals search engine

Viewing Call Detail Records

Use the following procedure to view call detail records.

AastraLink Web UI

Step	Action
1	Select **Maintenance->Call Records.**
2	View the log as applicable. To sort the report in ascending or descending order, click next to the field in the Call Records header row.

Downloading CDR Reports

You can also download the current Call Detail Record you are viewing, to your PC or server, or download an entire archived set of Call Detail Records.

To download the current contents of the CDR report and save it locally on your computer, click **<Download Current (.csv)>.** This option saves the file as **cdr_logs.csv**.

To download an archived set of CDR reports and save it locally on your computer or server, click **<Download Archive>**. This option saves a file as **cdr_archive.tar.**

You can import this data into software applications, such as a separate database, spreadsheet, or other billing mediation application.

For more information about using the download buttons on the "**Call Records**" page, see "About the Call Records Menu" on page 5-5.

Downloaded from www.Manualslib.com manuals search engine

Performing AastraLink Backup and Restore Tasks

You can save the current AastraLink Pro 160 system configuration database into a file, and download it to your PC for secure storage, from the **Maintenance->Backup & Restore** menu (Figure 5-3).

The backup file contains all voicemail and configuration information for the AastraLink Pro 160 system. The backup file is encrypted to prevent exposure of personal information.

In addition to backing up your AastraLink Pro, you can restore a previously backed up file onto the AastraLink Pro 160, in order to recover its original operating state.

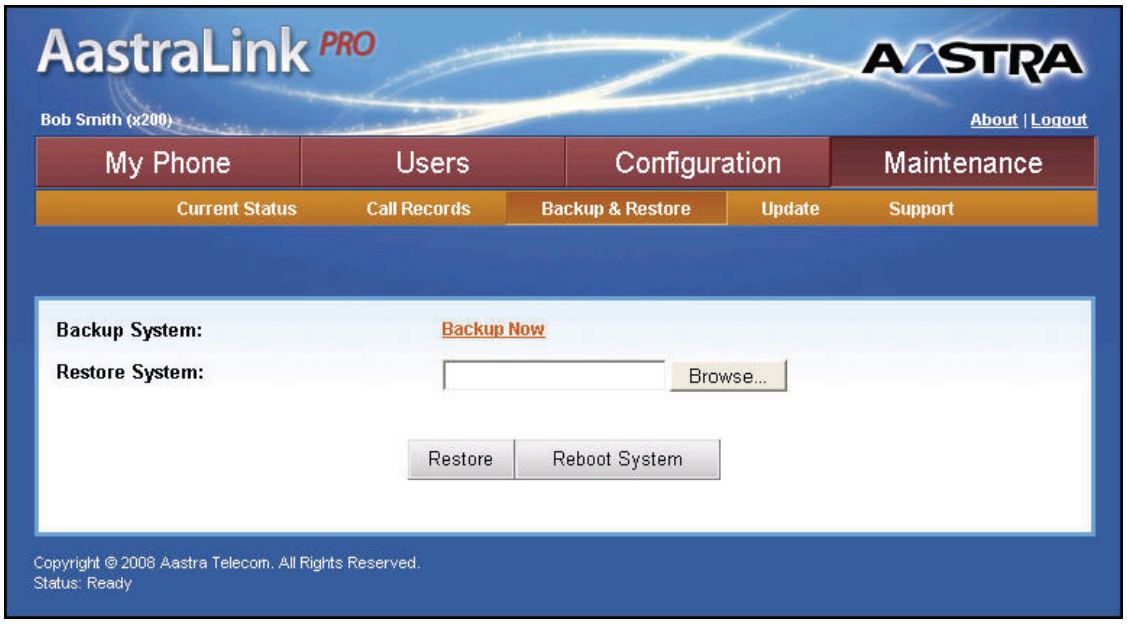


Figure 5-3. Backup and Restore Menu

This Backup and Restore screen also allows you to reboot the system if required using the **<Reboot System>** button.

Downloaded from www.Manualslib.com manuals search engine

Backup and Restore Guidelines

Review the following information and guidelines before performing AastraLink backup and restore operations:

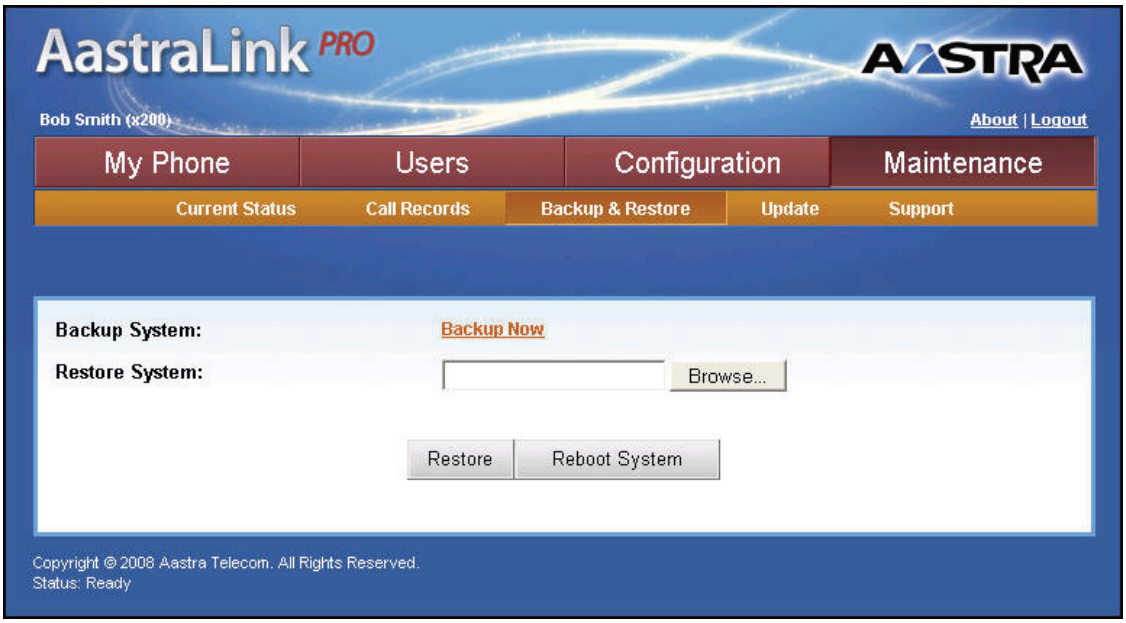
- To ensure that the confidentiality of voicemails is preserved, backup data is stored in the compressed and encrypted "AastraLink Backup File" (*.abf*) format.
- When a large amount of voicemail exists, the backup and restore process can take an hour or more to complete.
- When an *.abf* file is restored to the AastraLink Pro, existing configuration data for all users is replaced by the copy from the backup file. After uploading the backup file for restoration, the AastraLink must reboot to extract and apply the saved settings. During this process, a factory-default occurs, erasing the current configuration and replacing it with the copy from the backup file.
- After restoring from a backup, reboot all user phones to make certain that the AastraLink and the phones are in a consistent state. This action also automatically adds any missing phones to the corporate directory.
- If you restore a backup file that contained static IP network settings rather than DHCP, you must perform an additional reboot to activate the static IP settings after completing the database restore.

Downloaded from www.Manualslib.com manuals search engine

Backing Up AastraLink System Software

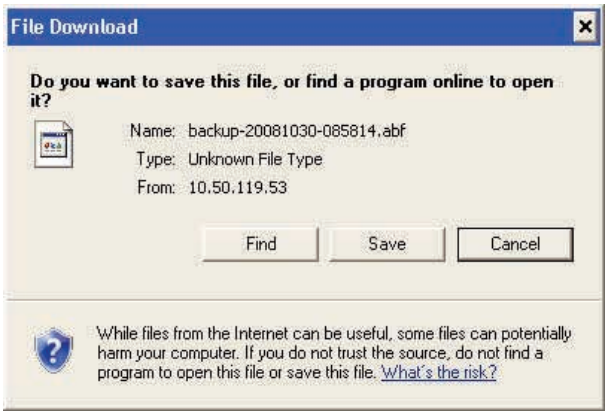
Use the following procedure to back up the AastraLink System Software.

AastraLink Web UI

Step	Action
1	Select **Maintenance->Backup & Restore.** 

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
2	To start the backup process for the AastraLink Pro 160, click **<Backup Now>.** The following prompt displays asking you to backup the AastraLink Pro configuration to an ".abf" file, cancel the backup process, or find an application on the Internet that will open the "*.abf*" file. 
3	Click **<Save>** to begin the backup process of the AastraLink configuration to an "*.abf*" file. The database is backed up internally, and once complete, the download commences. the download streams directly from the Compact Flash card, rather than from AastraLink Pro memory. This allows the entire 512MB or 1GB compact flash card to be backed up. Depending on the number of configured extensions (and amount of stored voicemail), this could take up to **30** minutes.

Downloaded from www.Manualslib.com manuals search engine

Restoring the AastraLink Configuration Database and Voicemail

Use the following procedure to restore a previously saved version of the AastraLink configuration database and voicemail onto the device.

Caution: Restoring from a backup will overwrite existing configuration and voicemail data.

AastraLink Web UI

Step	Action
1	Select **Maintenance->Backup & Restore.**
2	Click **<Browse>,** then select a previously saved *".abf"* file.
3	Click **<Restore>** to initiate the upload of the *.abf* file to the AastraLink Pro 160.
4	Once the upload is complete, click **<Yes>** to reboot the AastraLink Pro 160 and reload the new database. Once the reboot is complete, the LED light on the front of the AastraLink Pro 160 device flashes green. You can then log into the AastraLink Pro 160. **Note:** If you restore a backup file that contained static IP network settings rather than DHCP, you must perform an additional reboot to activate the static IP settings after completing the database restore.

Downloaded from www.Manualslib.com manuals search engine

Updating AastraLink System Software

You can apply new AastraLink system software to the unit from the **Maintenance->Update** menu (Figure 5-4).

Figure 5-4. Update Menu

AastraLink software updates use the *".dra"* file extension, and are available from the Aastra customer support web site. Commonly used update files include:

- *vnx.dra*: Contains new AastraLink system software for the CompactFlash.
- *obf.dra*: Contains new AastraLink system firmware for the onboard flash.
- *ipp.dra*: Contains new Aastra IP phone firmware.
- *mbu.dra*: Contains new Aastra MBU-400 and DECT 420d firmware

Downloaded from www.Manualslib.com manuals search engine

Note: For a link to the Aastra Support web site, click the "About" link in the upper right corner of the screen. For more information about the "About" screen, see "General Support" on page 5-24.

There are two ways to update your system software:

- **Automatic update:** Use if you want to specify a date/time for automatic updates to occur. This method also allows you to specify these options:
  - — Notify you when a new image is available.
  - — Download the latest system software file, but do not install it.
  - — Download the latest system software and install it (installs the software and reboots the AastraLink) automatically.
- **Manual Update:** Use if you want to manually update the AastraLink. You can either:
  - — Check the Aastra support website for updates, and if available, download the latest system software file.
  - — Update the AastraLink using a system software file stored locally.

Note: Aastra recommends creating a backup file of your current AastraLink Pro 160 system software *before* you perform the upgrade procedure described in this section. Some system updates may result in the loss of configuration or voicemail messages.

Downloaded from www.Manualslib.com manuals search engine

Automatic Updates

The AastraLink Pro prompts the Administrator if there is a firmware version mismatch between the on-board flash (OBF) and the compact flash (CF).

The Administrator can agree to update, in which case the AastraLink reboots and installs the new boot code, or the Admin can reject the update.

The administrator may also be prompted to run FXO auto-tuning of their lines, if this has not been performed since the last software update was installed.

If a prompt is rejected, AastraLink will prompts the Admin again at login after the next reboot of the system.

Use the following procedure to specify the parameters used to automatically update your AastraLink System Software.

AastraLink Web UI

Step	Action
1	Select **Maintenance->Update->Automatic Update**
2	Click on the **Automatic Updates** check box to select it.
3	Choose one of the following Update Methods: • **Notify only.** Select if you want the AastraLink to notify you using an email message when a new image is available. • **Download but don't install**. Select if you want the AastraLink to download the latest system software file, but not install it. • **Install (reboots system when updates are found)**. Select if you want the AastraLink to download the latest system software when it is available and install it (reboots the AastraLink) automatically.
4	In the **Check Every** field, specify how often the AastraLink should check the Aastra support website for updates.
5	In the **At Time** field(s), specify the time when the AastraLink should check for updates.
6	Click <**Save>** to save your changes.

Downloaded from www.Manualslib.com manuals search engine

Manual Updates

Use the following procedure to manually update your AastraLink System Software.

AastraLink Web UI

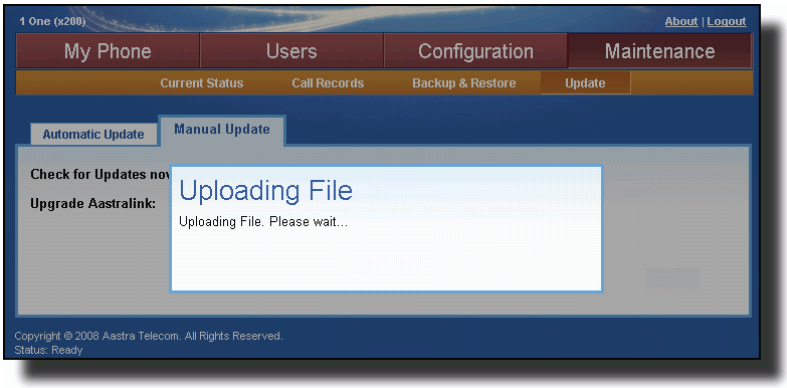
Step	Action
1	Select **Maintenance->Update->Manual Update**
2	Choose one of the following options: • **Check for Updates:** Select if you want the AastraLink to check the Aastra support website for updates. The AastraLink contacts the Aastra support website to check if a newer software version of any of the three *.dra* files is available. A dialog box appears, showing the number of updates available (or none if the AastraLink is already using the latest software). If an update is available, you can choose to immediately download and apply the update. • **Upgrade AastraLink:** Select if you want to locate an AastraLink System Software file of type *.dra* that you stored locally on your PC or server. Use the Browse button to locate the *. dra* file on your PC, then click **<Upgrade>** to begin downloading the file.
3	If you apply an updated *.dra* file, Click **<Reboot System>** to reboot the AastraLink Pro 160 using the updated AastraLink software. Your AastraLink reboots using the latest software image.

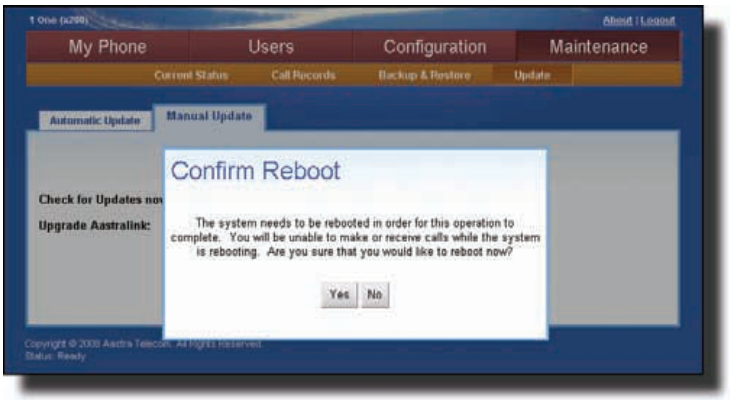
Downloaded from www.Manualslib.com manuals search engine

IMPORTANT NOTES

During the AastraLink Pro software update process, the Administrator must press the REBOOT button after the upgrade is successful.

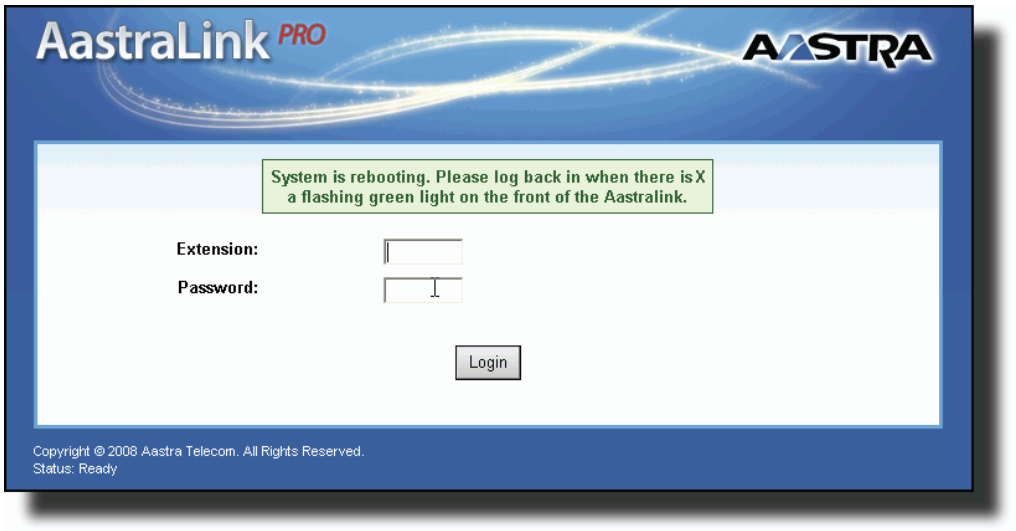
The Web UI displays the following message after pressing the REBOOT button: "*System is rebooting. Please login after there is a flashing green light on the front of the AastraLink.*"



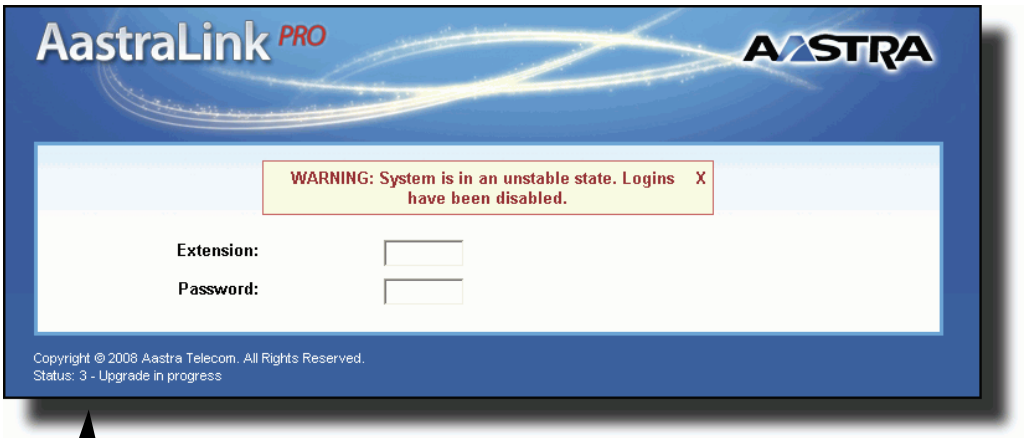

My Phone
Users
Configuration
Maintenance
Current Status
Call Records
Backup & Restore
Update
Automatic Update
Manual Update
Check for Updates now:
Upgrade Aastralink:
Confirm Reboot
The system needs to be rebooted in order for this operation to complete. You will be unable to make or receive calls while the system is rebooting. Are you sure that you would like to reboot now?
Yes
No

Downloaded from www.Manualslib.com manuals search engine

The User must watch for the flashing green LED on the front of the AastraLink Pro hardware before attempting to re-login to the AastraLink Web UI. If the User attempts to login too soon, the message "*Warning: System is in an upgrade state. Logins have been disabled.*" The status of the upgrade process also displays at the bottom left corner of the login dialog so the Administrator knows when the upgrade is complete.


AastraLink PRO
AASTRA
System is rebooting. Please log back in when there is a flashing green light on the front of the Aastralink.
Extension:
Password:
Login
Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: Ready

System Rebooting Message


AastraLink PRO
AASTRA
WARNING: System is in an unstable state. Logins have been disabled.
Extension:
Password:
Copyright © 2008 Aastra Telecom. All Rights Reserved.
Status: 3 - Upgrade in progress

Warning Message if Login Attempt Too Soon

AastraLink Status Display

Downloaded from www.Manualslib.com manuals search engine

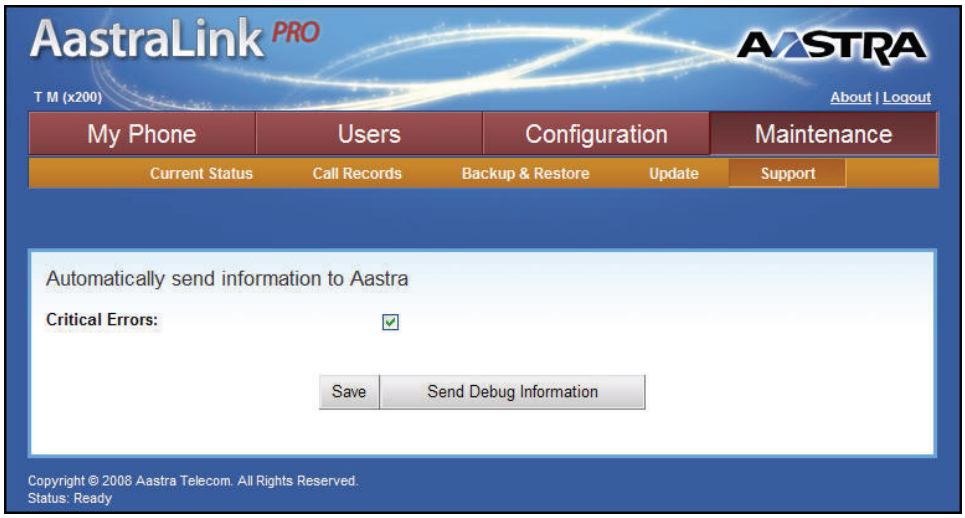
Support Information

Send Email to Aastra Support with Debug Reports

A feature of the AastraLink Pro 160 Web UI software allows you to send debug information about your AastraLink Pro to Technical Support at Aastra Telecom. You have the option of selecting whether you want to automatically send the information or send it manually when required.

Note: Whether you send debug information automatically or manually, both methods require correctly configured SMTP mail before sending the outbound reports to Aastra.

You send debug reports from the **Maintenance->Support** Menu.



This feature allows the administrator to send critical error debug logs and configuration logs to Aastra Support to aid in troubleshooting tasks. Enabling the "**Critical Errors**" field results in automatic crash reporting to Aastra support but with no personally identifiable information other than the serial number and IP address of the reporting system.

Aastra recommends that all users enable the "**Critical Errors**" reporting as soon as they have configured SMTP email transport, so that Aastra can be made aware of any crash trends and provide pro-active support.

Downloaded from www.Manualslib.com manuals search engine

Clicking **<Send Debug Information>** displays the following screen.

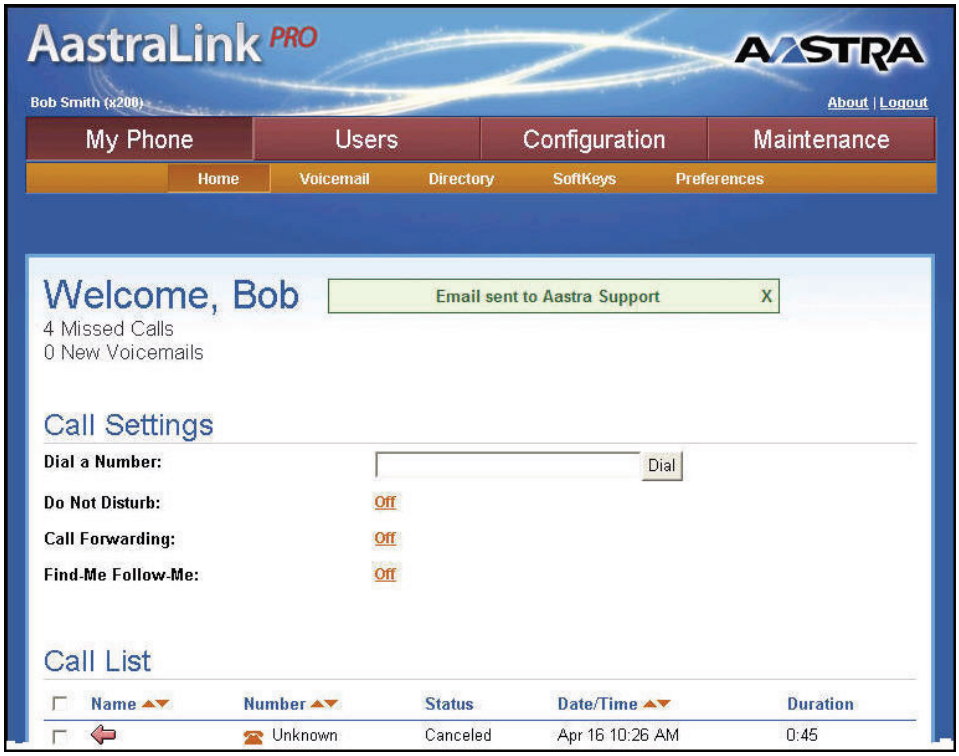
Note: The **<Send Debug Information>** button may include personally identifiable information, such as call logs and account details (passwords, etc.). However, the file attached to the email is encrypted to ensure that only Aastra support personnel have access to it.

Note: The AastraLink software requires you to enter an Aastra Case ID before sending any debug information. Contact Aastra Support prior to using this support feature.

The Send Debug Information screen allows the administrator to enter the name, daytime phone, and email of the person sending the report. An Aastra Case ID must also be specified. (Contact Aastra Support prior to sending the debug notification.)

Downloaded from www.Manualslib.com manuals search engine

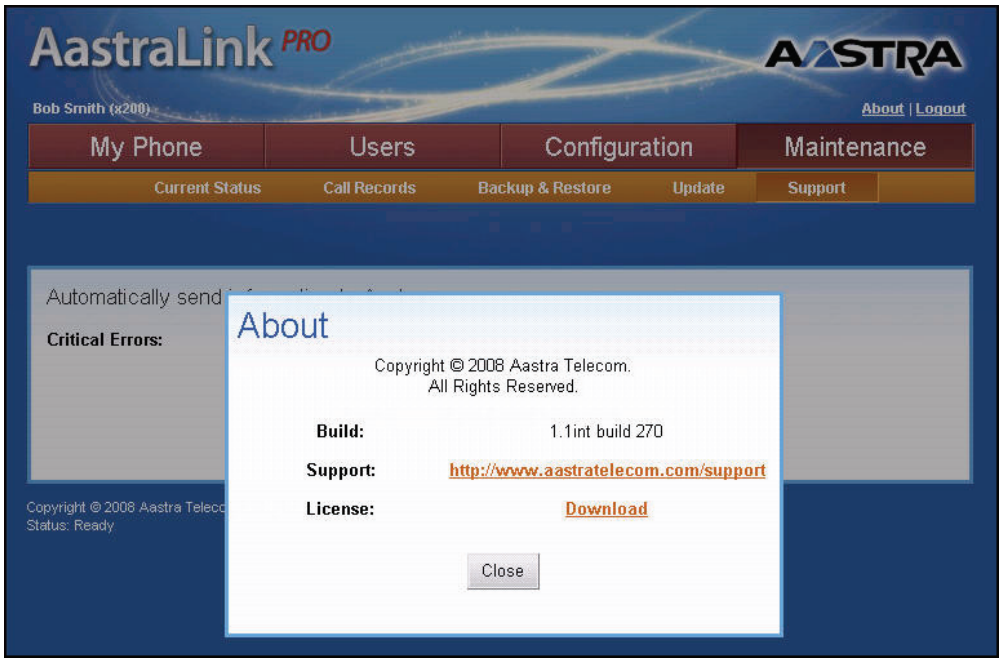
After submitting the debug notification to Aastra, the following message displays.



Downloaded from www.Manualslib.com manuals search engine

General Support

In an Administrator session, this screen displays the AastraLink Pro software build number, license download link, and a link to the Aastra Telecom Support Web page.



Field	Procedure
Build	Displays the current release and build number of your AastraLink Pro 160 software. This field is view-only.
Support	Click the specified link to automatically open a browser window and display the Aastra Support page. From this page, you can: • **Contact Aastra Technical Support** • **Download product documentation** • **View Frequently Asked Question (FAQs)**
License	Click **<Download>** to immediately download the current AastraLink Pro 160 License file (in PDF format) to your PC screen for viewing.

Downloaded from www.Manualslib.com manuals search engine

Chapter 6
AastraLink FAQs

This chapter describes frequently asked questions (FAQs) about installing and using the AastraLink Pro 160 in your IP phone network.

Topics

This chapter covers the following topics:

Topic	Page
How Does Network Addressing Work?	page 6-3
How Does IP Phone Auto-Configuration Work?	page 6-3
What is the Difference Between the Administrator Phone and User Phones?	page 6-4
Do I Ever Need to Re-Register IP Phones?	page 6-4
Can I Access My IP Phone Network From a Remote Office?	page 6-4
How Do I Assign An IP Phone To A Different User?	page 6-5
What Are Softkeys and How Do They Work?	page 6-5
How Do I Obtain the IP Address Assigned to the AastraLink Pro 160?	page 6-9
Why Do My IP Phone Screens Look Different?	page 6-10
Why Does The Web UI Occasionally Time-out?	page 6-10
How Do I Maximize System Performance?	page 6-10
Does This Guide Describe How To Operate My IP Phone?	page 6-11
How Does Auto-Fax Work on the AastraLink Pro 160?	page 6-11
Does the AastraLink Pro Support Routing to a FAX over IP (FOIP) Device?	page 6-11
Can I Add More PSTN Gateways to Add More Than Six FXO ports?	page 6-12
Can I Link Multiple AastraLink Pros Using AastraLink Trunks for Making Toll-Free Calls?	page 6-12

Downloaded from www.Manualslib.com manuals search engine

Topic	Page
Can I Create Custom Dial Plans on the AastraLink Pro?	page 6-12
Does My AastraLink Pro Support non-Aastra SIP Phones?	page 6-12
How Many Extensions Can the AastraLink Pro Host When SIP Trunking is Used?	page 6-12
If Custom “On Hold” Music is Enabled, Does it Play for Both Parked Calls and On-Hold Calls?	page 6-13
Does the AastraLink Pro Support Shared Line Appearance (SLA)?	page 6-13
How Do I Reduce the Initial Echo that Occurs at the Beginning of Each Call?	page 6-14
Can a Call Group Send a Voicemail to an Email Address?	page 6-14
Does the AastraLink Pro Support Analog Telephone Adapters (ATAs) for Adding More FXS Ports?	page 6-14

Downloaded from www.Manualslib.com manuals search engine

How Does Network Addressing Work?

The first time an AastraLink Pro 160 starts up, it attempts to use DHCP to obtain an IP address from a server on the network.

If that fails, the AastraLink Pro 160 then uses ZeroConf to assign itself an IP address within the range 169.254/16 (excepting the first and last 256 addresses in this range, which are reserved). The AastraLink Pro 160 uses its MAC address as a basis, then selects a random IP Address within the valid range. The AastraLink Pro 160 sends out ARP requests to see if the IP Address is already assigned to another device on the network. If so, the AastraLink Pro 160 assigns itself another random IP Address until it finds a free address.

Once the AastraLink Pro 160 is up and running, the administrator can use the Web UI to assign a static IP address to the device. The next time the AastraLink Pro 160 starts up, it uses the static address you assigned.

If the AastraLink Pro 160 device's public IP Address changes, the device sends an email message to notify the administrator.

How Does IP Phone Auto-Configuration Work?

When an Aastra IP phone starts up on your IP phone network, the phone uses multicast DNS to automatically discover the presence of an AastraLink Pro 160 device on the LAN. Once the AastraLink is discovered, the phone then obtains its configuration file from the device.

Note: Multicast DNS may not traverse between switched network segments (due to spanning tree non-convergence) or across subnet routers; therefore, it may be necessary to connect IP phones to the same Ethernet segment or IP Subnet as the AastraLink, before they can register to the AastraLink Pro.

If you are registering a new IP phone with the AastraLink, the IP Phone UI prompts you to specify the user's first name, last name, and email address. The AastraLink Pro 160 then automatically assigns the next free extension to the IP phone.

Downloaded from www.Manualslib.com manuals search engine

If there are multiple AastraLinks present on the LAN, then the Aastra IP phone UI displays the list of AastraLinks. You then select which AastraLink the phone should use to obtain its configuration file.

As administrator, you have the option to control new phone registration on your network. That is, if you wish, you can use the Web UI to restrict new phones from registering.

What is the Difference Between the Administrator Phone and User Phones?

The first IP phone you register with the AastraLink Pro 160 becomes the administrator phone. The administrator can configure and manage the AastraLink Pro 160, as well as configure all Aastra IP phones and user accounts on your network.

Once you register an administrator phone with the AastraLink, all other IP phones are registered as user phones. If you wish, you can assign administrator privileges to a user phone (s) using the Web UI.

Do I Ever Need to Re-Register IP Phones?

If an IP phone has been previously registered with the AastraLink Pro 160, it maintains the configuration information (user name/password/extension) even if it is removed, and then reinstalled, on the network.

Even if you set the IP phone back to its factory default settings, then all AastraLink registration information is erased locally from the phone; however when you re-connect the IP phone to the network, the IP phone re-discovers and re-registers with the AastraLink Pro 160 device.

Can I Access My IP Phone Network From a Remote Office?

Yes! The AastraLink provides remote office support. See Appendix A, “Remote Office Configuration of the IP Phone (Phone-Side)” for instructions on installing and registering remote user IP phones.

Downloaded from www.Manualslib.com manuals search engine

How Do I Assign An IP Phone To A Different User?

If an IP phone is already registered with the AastraLink device, and you want to reassign the IP phone to a different user, you must use the AastraLink Web UI to edit the user entry and change the name and extension number; or delete the old IP phone entry from the Users List, and add the new User phone reusing the previous extension if required.

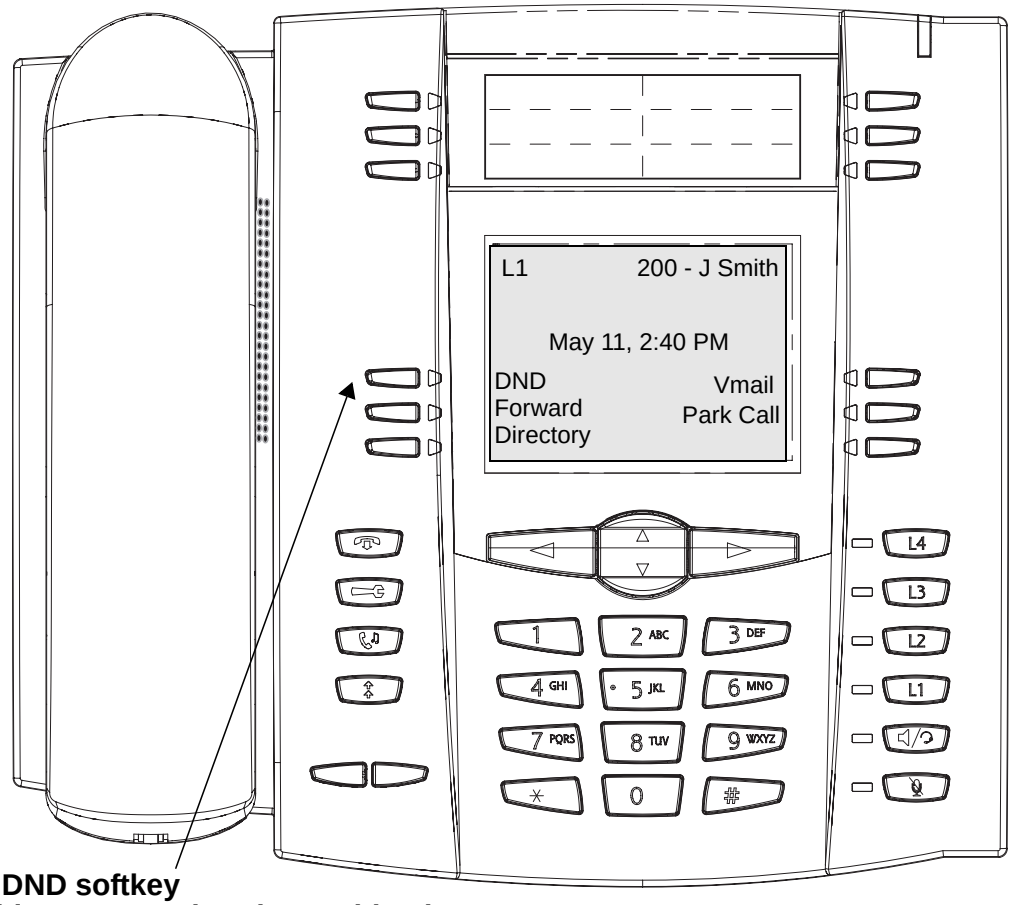
What Are Softkeys and How Do They Work?

Softkeys function exactly like the hard keys on your IP phone. When you press a softkey, an action takes place. For example, when you press the DND softkey, you enable Do Not Disturb on your phone.

The difference between hard keys and softkeys is that softkeys are *programmable*. You can use the AastraLink Web UI to change a softkey so it performs a different function. For example, you can change a DND softkey to a Speeddial softkey, or one of 15 other softkey types available. You can also add or delete softkeys.

As administrator, you have the option to change the default softkey settings for the IP phones on your network. See “Default Softkeys (Users Menu)” on page 3-54 for instructions.

Downloaded from www.Manualslib.com manuals search engine



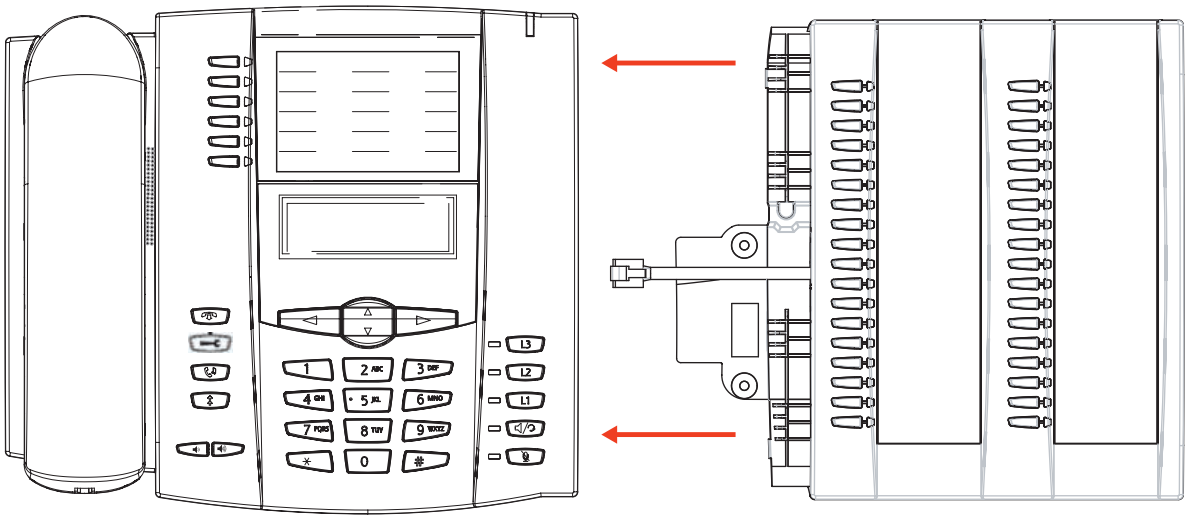
Press DND softkey to enable “Do Not Disturb” on this phone.

Downloaded from www.Manualslib.com manuals search engine

What are Expansion Modules?

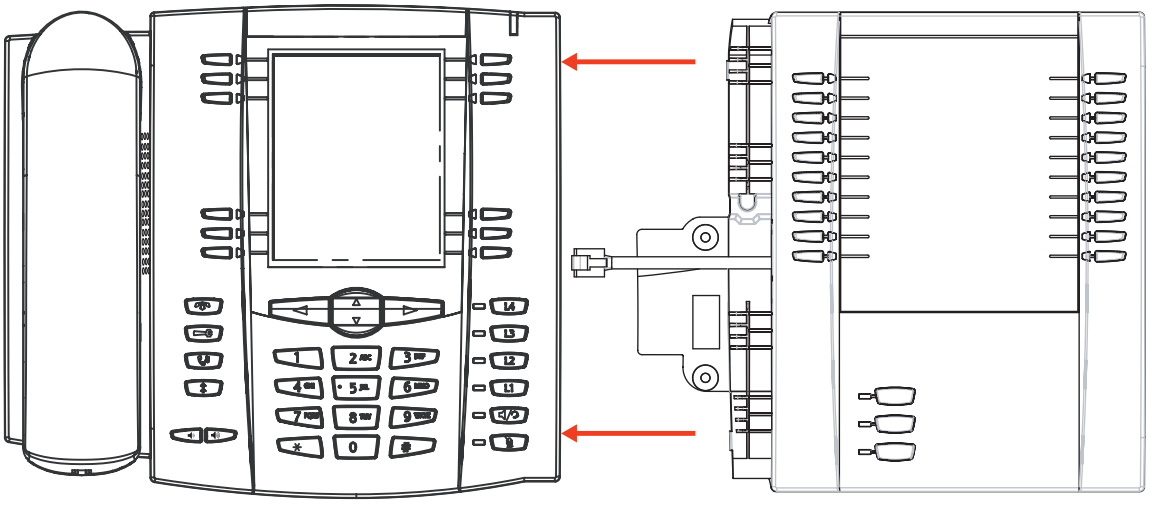
The 675xi Series Aastra IP SIP Phones offer expansion module units that can attach to the right side of the phone to provide additional softkeys. These expansion modules are called the 536M and the 560M.

Model 536M



For Phones 6753i, 6755i, 6757i, and 6757i CT

Model 560M



For Phones 6755i, 6757i and 6757i CT

Downloaded from www.Manualslib.com manuals search engine

The 536M provides 36 additional softkeys and can attach to a 6753i, 6755i, 6757i or 6757i CT. The 560M provides 60 additional softkeys and can attach to a 6755i, 6757i, and 6757i CT.

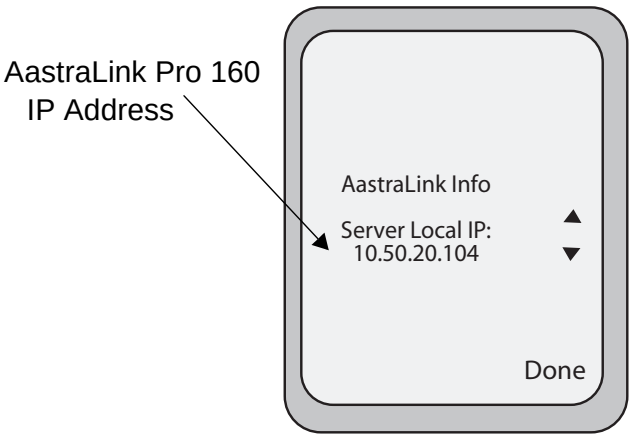
The expansion modules support the same key functions as the applicable IP Phone for which it is connected. Each key provides an LED for indicating call status. The M670i provides a paper label for convenient key labeling, and the M675i provides an LCD for displaying key labeling.

Note: You use the AastraLink Web UI to configure the additional expansion module softkeys. For an Administrator phone, refer to Chapter 2, the section, "Default Softkeys for Expansion Modules (Administrator or User Phone)" on page 3-64 for more information. For a User phone, refer to the *AastraLink Pro 160 User Guide*.

Downloaded from www.Manualslib.com manuals search engine

How Do I Obtain the IP Address Assigned to the AastraLink Pro 160?

You can view the IP Address assigned to the AastraLink Pro 160 using your Aastra IP phone, and the procedure described below.

Step	Action
1	Press Options key on the phone key pad (or the **Options** key on the Aastra IP phone models 9143i, 9480i, and 9480i CT) to bring up the **Options** list.
2	Use △ and ▽ to scroll through the list key to select **Phone Status**, then press **<Show>**
3	Select **AastraLink Info**, then press **<Show>**
4	Press the down **<Arrow>** until the AastraLink IP Address menu appears (see below). In this example, the IP Address of the AastraLink Pro 160 is **10.50.20.104** 
5	Write down the IP Address of your AastraLink Pro 160. You need it to access the AastraLink Web UI.
6	Press **<Done>** to exit.

Downloaded from www.Manualslib.com manuals search engine

Why Do My IP Phone Screens Look Different?

If you install an AastraLink Pro 160 on your existing IP phone network, then you will notice some phone UI changes when you register the phones with the device.

Users who previously operated their IP phones in generic SIP mode should note the following information:

- Some menu options no longer appear on the Aastra IP phone UI, or are located on different screens. See the *AastraLink IP Phone User's Guide*.
- The Aastra IP phone UI displays several new menu options that apply to the AastraLink Pro 160 device itself.

Why Does The Web UI Occasionally Time-out?

For security reasons, the Web UI automatically logs a user off after 10 minutes of inactivity. The Web UI displays the login screen, along with a message informing you to log back in again. The Web UI may also temporarily disconnect the session if a temporary error occurs while connected to the AastraLink during processing of a data load or save operation; waiting a few minutes before logging back in and repeating the operation should generally be successful.

How Do I Maximize System Performance?

To maximize system performance, Aastra requires connecting the AastraLink to a full-duplex Ethernet device, such as a router or switch, rather than a half-duplex device such as a hub.

For example, if you are experiencing network problems such as garbled voice-path or Web UI time-outs, check the front LED on the AastraLink device. If it is slowly flashing red - about once per second - then the AastraLink is running normally, but in a degraded state. (a full-duplex network connection could not be negotiated). This causes timeouts, restricts the system capacity and/or causes problems with collisions or integrity of the network connection.

Downloaded from www.Manualslib.com manuals search engine

Does This Guide Describe How To Operate My IP Phone?

IP Phone operation - for example, how to use the buttons, softkeys, and hard keys on your model IP phone - is beyond the scope of this guide.

For instructions on operating Aastra IP phones, and using Aastra IP phone features, refer to the *AastraLink Pro 160 IP Phone User's Guide*.

How Does Auto-Fax Work on the AastraLink Pro 160?

The AastraLink Pro 160 allows you to physically connect a FAX machine to FXS Port A on the rear panel to send/receive fascimile communications. When two Fax machines (or Fax modems or Fax servers) first connect, they exchange tones called the called station identification (CED) and calling tone (CNG). These tones confirm that the other party is a fax machine and not a voice call.

A calling fax machine plays the CNG tone, a short 1100Hz tone that is periodically repeated. An answering fax machine plays the CED tone, a high-pitched (2100Hz) long tone.

The FXS Port that the FAX machine is connected to on on the AastraLink Pro, detects the incoming V.21 fax answer tone and CED calling tone in parallel for all FXO calls. If a fax call is detected, it routes through to FXS Port A. If FXS Port A is busy, the call gets a post-answer busy tone, so the calling party can try again later.

For more information about Auto-Fax, see Chapter 3, the section, "

Does the AastraLink Pro Support Routing to a FAX over IP (FOIP) Device?

No. The AastraLink Pro is limited only to the FXS ports on the back of the AastraLink Pro. Voiceband fax over IP is also not supported by the current software.

Downloaded from www.Manualslib.com manuals search engine

Can I Add More PSTN Gateways to Add More Than Six FXO ports?

No. The FXO port limit on the AastraLink Pro is six. Aastra recommends using a SIP trunk service provider if more than six PSTN calls are required. Generic SIP trunk servers (such as Asterisk) may be used locally.

Can I Link Multiple AastraLink Pros Using AastraLink Trunks for Making Toll-Free Calls?

Yes! You can link multiple AastraLink Pros using AastraLink trunks. This is a toll bypass feature. However, an Administrator can block toll bypass using the barred numbers on the far-end system.

If the toll-bypass feature is enabled, calls made from one remote office to another can be made using the dial pattern 7+1+9+external number. So an office in Chicago can dial 7+1+9+external number to call an office in Dallas and the call acts like a local call avoiding any long distance charges.

Can I Create Custom Dial Plans on the AastraLink Pro?

No. The AastraLink Pro does not support custom dial plans.

Does My AastraLink Pro Support non-Aastra SIP Phones?

Yes! In AastraLink Pro softtware Release 1.2 and later. The AastraLink Pro allows generic SIP phones to be used as secondary phones. Each Aastra SIP phone is given an automatic secondary account which can be used for generic SIP devices such as softphones, etc. However, non-Aastra phones are not permitted to be the primary account, as they do not support the required XML features.

How Many Extensions Can the AastraLink Pro Host When SIP Trunking is Used?

Call processing capacity is based on concentration and concurrent channels. The AastraLink Pro 160 supports 6 FXOs with 4:1 concentration, plus an operator = 25 concurrent users. Adding SIP trunks allows this to be doubled, allowing a **potential of 50 users and 12 active calls.**

Downloaded from www.Manualslib.com manuals search engine

Note: These are not hard limits, this is based on the point at which the platform performance has been tested to degrade. It is possible to make more than 12 calls, but quality degrades and the unit may go into overload, resulting in loss of service. Active calls relates to host-routed calls only; it does not include any additional calls which are stable between SIP extensions (these do not route though the host unless they are remote office users, in which case they do count as hosted active calls).

If Custom “On Hold” Music is Enabled, Does it Play for Both Parked Calls and On-Hold Calls?

Yes. Music on-hold is played to incoming parked calls and to calls put on hold by a SIP extension.

Does the AastraLink Pro Support Shared Line Appearance (SLA)?

Yes. In Release 1.2 and later, the AastraLink Pro supports SLA, which allows the AastraLink to provide key system features in addition to its existing Private Branch eXchange (PBX) functionality.

SLA and PBX can be used exclusively (i.e. all FXO lines as SLA, or all FXO lines as PBX) or in a mixed mode. To differentiate between modes, the AastraLink user interface refers to non-SLA lines as ’Pool’ lines, as they provide pooling of incoming and outgoing lines for call processing purposes.

SLA is configurable on a per FXO basis on the AastraLink Pro. When no FXOs are configured as SLA, all 6 FXO ports perform the PBX dial plan operation as outlined in Release 1.1 of the AastraLink Pro.

Any FXO ports not allocated for SLA use are available for processing PBX calls, and for Pool outgoing calls. A configurable timer allows SLA incoming calls to overflow to PBX dial plan routing (auto-attendant, ring groups etc.), and outgoing PBX calls will overflow to SLA lines if no FXO Pool line is available.

SLA membership, for example, whether a phone is to participate in the SLA key system, or whether it is to be permitted access to PBX Pool lines only, can be configured independently for each local and remote office phone.

FXO line to SIP phone key mapping for SLA varies by phone model.

Downloaded from www.Manualslib.com manuals search engine

In Release 1.2 and later, the AastraLink Pro supports SLA on hard keys L1 through L4, and then softkeys for L5 and L6 on the 6755i, 6757i, 6757i CT, 9480i, and 9480i CT IP Phones. Models 6753i and 9143i IP Phones support a subset of SLA on hard keys L1 through L3.

For more detailed information about SLA, see Chapter 3, the section, “

How Do I Reduce the Initial Echo that Occurs at the Beginning of Each Call?

After runninng the “Audio Tuning Wizard”, an initial echo can still occur at the beginning of each call. This is echo canceller convergence. It means the EIA line profile was not correctly/sufficiently balanced to avoid echo when the tuning wizard was used.

To correct this, check that the correct PSTN/PBX line profile was selected, or try the other one and re-balance the EIA again. Cx should be able to minimize echo during the Tuning Wizard, so that the echo canceller doesn't have to work so hard and, hence, less convergence time. However, there will always be some initial echo regardless of how well the line is balanced.

Can a Call Group Send a Voicemail to an Email Address?

Yes. However, the email will be sent to each individual email address for every user who is a member of the group. (The AastraLink Pro does not support a single email address for a Call Group.)

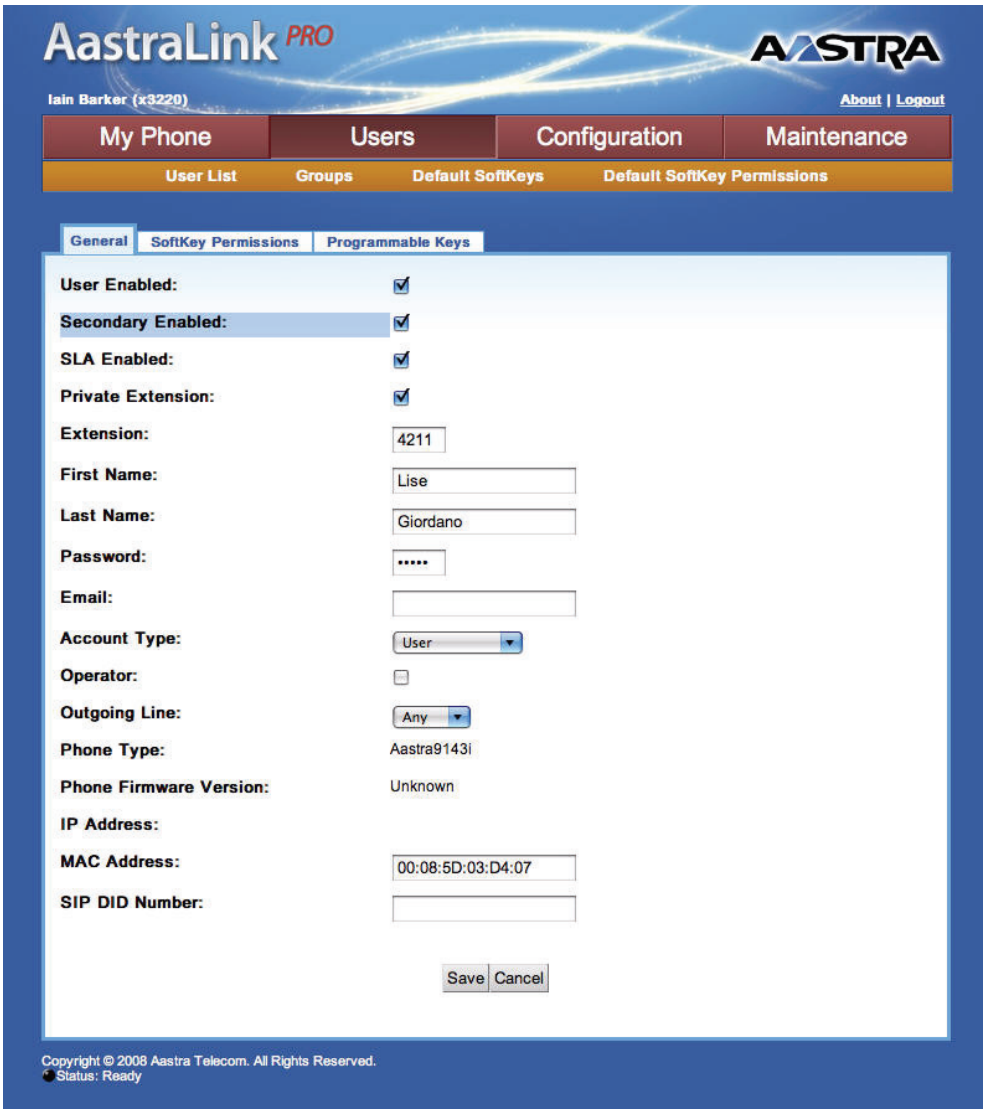
Does the AastraLink Pro Support Analog Telephone Adapters (ATAs) for Adding More FXS Ports?

Yes. You can use FXS ATAs as secondary SIP phones on the AastraLink Pro. The AastraLink Pro can use any SIP device which accepts a SIP registration from the AastraLink (for example, any device that can act as a SIP registrar or server). The AastraLink Pro does not work directly with client devices, but servers such as Asterisk boxes with FXS channel banks have been tested and work successfully. Note, however, that the AastraLink Pro only supports an overall limit of 12 concurrent sessions through the AastraLink host CPU.

Downloaded from www.Manualslib.com manuals search engine

How do I Register a Generic SIP Device as a Secondary SIP Phone?

The following illustration shows a user “John Smith” as the user of a secondary phone in the AastraLink network. This illustration shows an X-Lite softclient as an example.



Downloaded from www.Manualslib.com manuals search engine

Downloaded from www.Manualslib.com manuals search engine

Chapter 7
Troubleshooting Solutions

About this Chapter

Introduction

This chapter contains several trouble-shooting solutions for the AastraLink Pro 160. It describes how to interpret the LED status indicator located on the AastraLink front panel. It also describes how to reboot the AastraLink using either the Web UI, or the reset switch. In addition, it describes how to use the reset switch to restore original factory default settings on the device, in order to return it to an out-of-the-box state.

This chapter also describes how to use the AastraLink Recovery Mode UI to reinstall system software (that is, reprogram the CompactFlash card and/or the Onboard flash.) if it is ever required.

Topics

This chapter covers the following topics:

Topic	Page
Monitoring the AastraLink Status LED	page 7-3
Rebooting the AastraLink	page 7-5
Rebooting Using the Web UI	page 7-5
Rebooting Using the Reset Switch (Hard Reboot)	page 7-6
Rebooting Using the Web UI	page 7-5
Restoring AastraLink Factory Default Settings	page 7-7
What Happens if I Restore Factory Default Settings?	page 7-7

Downloaded from www.Manualslib.com manuals search engine

Topic	Page
Using the Reset Switch to Restore Factory Default Settings	page 7-7
What To Do After Restoring Factory Default Settings	page 7-8
Reinstalling System Software Using Recovery Mode	page 7-11
Automatic Recovery Mode	page 7-12
Manual Recovery Mode	page 7-13
Using The AastraLink Recovery Mode UI	page 7-14
Using AastraLink System and Phone Log Files	page 7-31

Downloaded from www.Manualslib.com manuals search engine

Monitoring the AastraLink Status LED

The LED on the front of the AastraLink Pro 160 indicates the current status of the device. The current LED state also displays on the bottom left of the status bar each time a WebUI page is refreshed. The table below describes the LED variations.

LED Color	Meaning
Off	Power is off.
Steady Green	The AastraLink Pro 160 has successfully completed internal hardware diagnostic tests and is starting up.
Alternating Green/Red	The AastraLink Pro 160 is updating its onboard firmware, either because it is the first time you started up the device, or you just uploaded a new firmware image. **Warning**: Do not interrupt power during the system update, as system corruption can result.
Flashing Green	The AastraLink Pro 160 has successfully booted and is up and running, ready to process calls.
Alternating Green/Red/Off	The AastraLink Pro 160 is running in recovery mode. This sequence occurs if the last boot attempt failed. Try rebooting. If the problem persists, use the recovery procedure described in *"Reinstalling System Software Using Recovery Mode"* on page 7-11.
Flashing Red	The AastraLink Pro 160 is running in a degraded state: • Flash speed: *Slow* (approximately once per second) indicates that the AastraLink is running normally but that a full-duplex network connection could not be negotiated. This may limit the system capacity and/or cause problems with collisions or integrity of the network connection, leading to problems such as WebUI time-outs and garbled voice-path. Recommend connecting the AastraLink to a full-duplex Ethernet device, such as a router or switch, rather than a half-duplex device such as a hub. • Flash speed: *Fast* (approximately 5 times per second) indicates a system error occurred during startup; the AastraLink software was unable to initialize correctly. Contact Aastra support for assistance with diagnosing the problem.

Downloaded from www.Manualslib.com manuals search engine

LED Color	Meaning
Steady Red	Hardware self-test failure; system halted. Try rebooting. If LED remains steady red, contact Aastra Support.
Steady Amber	The Aastralink is in the process of restoring factory default settings.

Downloaded from www.Manualslib.com manuals search engine

Rebooting the AastraLink

This section describes how to reboot (restart) the AastraLink Pro 160.

You can reboot the AastraLink from the Web UI, or reboot it manually, using the reset switch located on the back of the device (next to the power receptacle, as shown on page 7-6).

Rebooting Using the Web UI

To reboot the AastraLink using the Web UI, do the following tasks:

AastraLink Web UI

Step	Action
1	Login to the AastraLink as Administrator.
2	Select **Maintenance->Current Status**
3	Click on the **<Reboot System>** button. The AastraLink reboots. Once the reboot is complete, you will need to login to the system again to access the AastraLink Web UI.

Downloaded from www.Manualslib.com manuals search engine

Rebooting Using the Reset Switch (Hard Reboot)

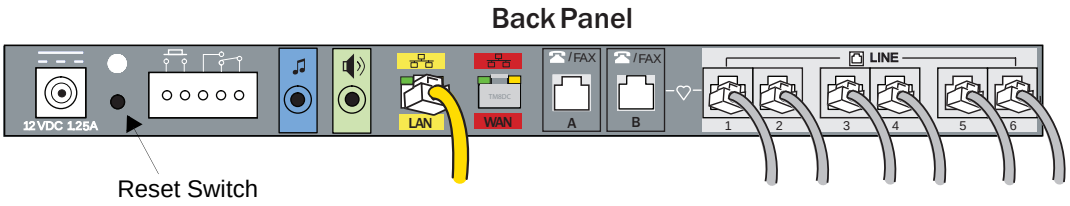
You can reboot the AastraLink device using the reset switch as long as the LED on the front of the Aastralink is in one of the following states:

- Flashing green
- Flashing red
- Steady red

See the LED monitoring table on page 7-3 for a description of each LED state.

Use the following procedure to reboot the AastraLink.

Manual Reboot Procedure

Step	Action
1	Locate the reset switch on the back of the device, as shown on the figure below. 
2	Use the end of a paperclip to press, and then immediately release, the reset switch. **IMPORTANT: DO NOT KEEP THE SWITCH PRESSED IN.** After five seconds, the LED turns red momentarily. This indicates that the AastraLink is resetting hardware. The AastraLink then begins its normal reboot process. The LED turns steady green as the device performs internal hardware diagnostic tests. Once tests are complete, the LED flashes green, indicating a successful reboot. The device is now up and running, ready to process calls.

Downloaded from www.Manualslib.com manuals search engine

Restoring AastraLink Factory Default Settings

What Happens if I Restore Factory Default Settings?

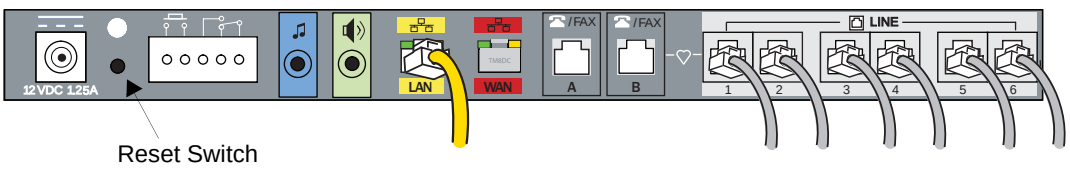
If you restore factory default settings on the AastraLink Pro 160, it reverts the device to its out-of-the-box state — just as it was shipped from the factory. Before you perform the instructions in this section, note that all configuration information, voicemail, and other files stored on the AastraLink's CompactFlash card are *erased* as a result of this process.

In addition, after you restore AastraLink factory default settings, you need to once again perform the initial startup sequence - that is, you need to register an Administrator phone with the device, and specify several start-up parameters - in order for the device to begin handling calls on your network.

Using the Reset Switch to Restore Factory Default Settings

Use the following procedure to restore factory default settings on the AastraLink Pro 160.

Factory Default Restoration Procedure

Step	Action
1	Locate the reset switch on the back of the device. **Back Panel**  Reset Switch The reset switch is located on the back of the AastraLink Pro 160 (next to the power receptacle).

Downloaded from www.Manualslib.com manuals search engine

Factory Default Restoration Procedure	
Step	**Action**
2	Verify that the LED on the front of the device is flashing green, or flashing red.
3	Use the end of a paperclip to press and hold the reset switch. The LED on the front panel flashes RED for 10 seconds, then changes to AMBER. Release the reset switch when the LED is AMBER, the factory default will commence. **Note:** Releasing the switch during flashing RED resets rather than factory-defaults the system. The AastraLink begins reverting to its factory default settings. The process takes up to 30 seconds to complete. During this process, all configuration information, voicemail, and other files stored on the AastraLink are erased. The AastraLink then begins its normal reboot process. The LED turns steady green as the device performs internal hardware diagnostic tests. Once tests are complete, the LED flashes green, indicating a successful reboot. The device is now up and running.

What To Do After Restoring Factory Default Settings

After restoring factory default settings on the AastraLink device, you must re-register an IP phone with the device, and use it to specify initial startup configuration parameters.

Note: The instructions in this section assume you have previously configured an Administrator IP phone on your AastraLink network. Therefore, this section does not describe initial IP phone setup or installation instructions. For this type of information, see the *AastraLink Administrator's QuickStart Guide.*

Downloaded from www.Manualslib.com manuals search engine

Use the following procedure to register an Administrator IP phone with the AastraLink Pro 160.

Administrator IP Phone Registration Procedure

Step	Action
1	Restart an Aastra IP phone. By default, the first IP phone you register with the device becomes the Administrator IP phone. When the phone starts up on your IP phone network, it automatically discovers the presence of an AastraLink Pro 160 device on the LAN. Once the AastraLink is discovered, the phone then obtains its configuration file from the device, and reboots. **Note:** For more information about Aastra IP phone auto-configuration, as well as other frequently asked questions, see AastraLink FAQs on page 6-1. For a complete description of the initial startup procedure — including phone installation and setup instructions — see the *AastraLink Pro 160 Administrator's Quickstart Guid*e. Once the reboot completes, the IP phone UI prompts you to begin the registration procedure, as described in Step 2.
2	Choose the system language used on your AastraLink network, then press **<Select>**.
3	Choose the country where the AastraLink resides, then press **<Select>.**
4	Choose the time zone for the AastraLink to use, then press **<Select>.**
5	Do one of the following actions: • If the Internet is available on your network, choose "Automatic" then press **<Select>** to allow the AastraLink Pro 160 to set the local Date/Time for your phone • if the Internet is not available, choose "Manual" then press **<Select>** and follow the Phone UI prompts to set the date and time locally.
6	Choose "Use Default", then press **<Select>**, for your phone to use these default settings: • Extension Length (3) • First Extension (200)
7	Enter the first name of the Administrator, then press **<Enter>**.
8	Enter the last name of the Administrator, then press **<Enter>**.

Downloaded from www.Manualslib.com manuals search engine

Administrator IP Phone Registration Procedure

Step	Action
9	(Optional) Enter the Administrator email address, then press **<Enter>**. **Note:** To enter the @ symbol, press the # key until it appears on your Phone UI. You can skip this step and enter the email address later using the AastraLink Pro 160 Web UI.
10	Enter the Administrator password, then press **<Enter>**. Your Administrator phone reboots. When the startup process is complete, your Phone UI displays the IP address of the AastraLink Pro 160. Use this address to access the AastraLink Pro 160 using the Aastra Web UI.
11	Press **<Exit>** to complete the Administrator IP phone registration process.

Downloaded from www.Manualslib.com manuals search engine

Reinstalling System Software Using Recovery Mode

The AastraLink Pro 160 contains an automatic fail-back mode in its onboard firmware that allows the system to be recovered if it encounters a problem when booting from the CompactFlash root file system.

The AastraLink Pro 160 enters automatic “recovery mode” after a failed boot. If necessary, it is also possible for you to initiate recovery mode, by booting the system with the CompactFlash card removed (see “Manual Recovery Mode” on page 7-13 for instructions).

When the AastraLink Pro 160 is in recovery mode, you can use your web browser to access the Recovery Mode UI, which allows you to:

- Reprogram the CompactFlash card back to the default “greenfield” state, as if it were just received new from the factory.
- Reprogram the Onboard flash (firmware), using a new firmware image.
- Restore a previous *.avf* backup file onto the ComapctFlash.

Caution: Reprogram the Onboard flash under the direction of Aastra support personnel only. Incorrect usage can make the AastraLink Pro 160 unbootable, requiring the device to be returned to the factory for repair.

Downloaded from www.Manualslib.com manuals search engine

Automatic Recovery Mode

File system corruption is a rare event, but it can occur if a power outage or a manual reset is performed while data is being written to the file system. Normally, any corruption caused to the CompactFlash filesystem in this manner corrects itself automatically the next time the AastraLink Pro 160 boots.

However, if the CompactFlash card becomes so corrupt that it cannot be automatically repaired, the AastraLink Pro 160 boots in recovery mode. The LED alternates Green/Red/Off when the AastraLink Pro 160 is in recovery mode (rather than the usual “flashing Green” LED).

If your AastraLink is in recovery mode, proceed to “Using The AastraLink Recovery Mode UI” on page 7-14.

Downloaded from www.Manualslib.com manuals search engine

Manual Recovery Mode

If the AastraLink did not automatically enter Recovery Mode, but you need to reprogram the CompactFlash or Onboard flash, you can use the following procedure to manually initiate recovery mode.

AastraLink Web UI

Step	Action
1	Power off the AastraLink Pro 160.
2	Eject the CompactFlash card from the front of the system. The ejector handle folds over and may need to be extended from its recessed position before the card can be ejected.
3	Power on the AastraLink Pro 160.
4	After 30 seconds, verify that the AastraLink Pro 160 has entered recovery mode. The LED flashes a Green/Red/Off pattern when it is in recovery mode.
5	Insert the CompactFlash card, and ensure that it is fully seated in the slot.
6	To access the Recovery Mode UI, use a web browser and enter the following address: http:// < DHCP client address received on the LAN interface> **NOTE:** If you do not know the IP address of the LAN interface, see “Obtaining the IP Address of Your AastraLink Pro 160” on page 7-14. The AastraLink Recovery Mode UI appears. To set the AastraLink Pro 160 back to its factory default settings, use the procedure described “Reprogramming the CompactFlash Card” on page 7-17.

Downloaded from www.Manualslib.com manuals search engine

Using The AastraLink Recovery Mode UI

This section describes how you use the AastraLink Recover Mode Web UI to reload or repair system software or firmware, and perform more advanced tasks. To do so, you must:

- First, obtain the IP address of the AastraLink Pro 160 so you can communicate with the device.
- Second, use the Recovery Mode UI to reprogram or repair the CompactFlash card, or Onboard flash, as necessary.

Obtaining the IP Address of Your AastraLink Pro 160

If you do not know the IP address of your AastraLink Pro 160, you can obtain the IP address of the AastraLink device using one of the methods described in this section.

For DHCP Networks

When operating in recovery mode, the AastraLink Pro 160 uses DHCP to attempt to obtain an IP address on the LAN network. If DHCP was previously being used for normal operation, and the DHCP server on the network supports MAC address caching, then the AastraLink Pro 160 uses same IP address in recovery mode as in normal operation.

You can use an Aastra IP phone to find the IP address of the AastraLink Pro 160, as described in the following procedure.

Downloaded from www.Manualslib.com manuals search engine

Phone UI

Step	Action
1	Press the **<Options>** key or **Options** button on your Aastra IP phone.
2	Select **Phone Status/AastraLink Info/Server Local IP** The IP address assigned to the AastraLink appears. For example:
3	To access the Recovery Mode UI, use a web browser and enter the following address: http:// < DHCP client address received on the LAN interface> For example, enter: http://10.50.20.104 The AastraLink Recovery Mode UI appears. To set the AastraLink Pro 160 back to its factory default settings, use the procedure described “Reprogramming the CompactFlash Card” on page 7-17.

Downloaded from www.Manualslib.com manuals search engine

For non-DHCP Networks

If the AastraLink Pro 160 was not using DHCP to obtain an IP address on the LAN, then to communicate with the AastraLink, you can use a direct, back-to-back Ethernet connection between the AastraLink WAN interface and a PC.

In recovery mode, the AastraLink operates as a DHCP server for the private 192.168.100.100/24 network using the WAN port. So, when you connect the AastraLink to PC as described above, the AastraLink Recovery Mode DHCP server assigns a 192.168.100.10x address to the PC.

Once you have established communication between your PC and the AastraLink Pro 160, you then access the AastraLink Recovery UI to set the AastraLink Pro 160 back to its factory default settings

Use the following procedure to establish communication between your AastraLink Pro 160 and your PC.

Direct Connection from AastraLink WAN port to your PC

Step	Action
1	Connect an Ethernet cable from the WAN port located on the back of the AastraLink Pro 160 to the LAN port on your PC. The PC must be configured to be a DHCP client. Once you make this connection, the AastraLink Recovery Mode DHCP server assigns a 192.168.100.10x address to the PC.
2	To access the Recovery Mode UI, use a web browser and enter the AastraLink default address of 192.160.100.100. That is, enter: http://192.168.100.100 The AastraLink Recovery Mode UI appears. To set the AastraLink Pro 160 back to its factory default settings, use the procedure described “Reprogramming the CompactFlash Card” on page 7-17.

Downloaded from www.Manualslib.com manuals search engine

Reprogramming the CompactFlash Card

If the CompactFlash (CF) card is defective, and a replacement card needs to be programmed with a factory fresh image, you can use the Recovery Mode UI to set the AastraLink Pro 160 CompactFlash card back to its original settings

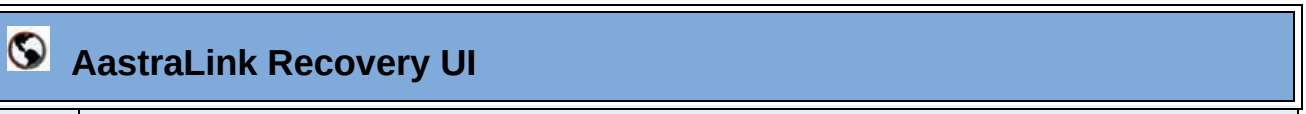
You should only reprogram the CompactFlash card if the AastraLink Pro 160 is continually entering recovery mode and will not correct itself, even after several reboot attempts.

Notes: Before starting the reprogramming procedure, note the following important information:

- When you reprogram the CompactFlash card, all configuration and voicemail data stored on the card is erased.
- Before you can reprogram the CompactFlash card, you must download the *vnx.dra* file from the Aastra support web site, and store the file on a TFTP, FTP, or HTTP server that is accessible to the AastraLink Pro 160 using its LAN connection.

Use the following procedure to reprogram the Compact Flash Card.

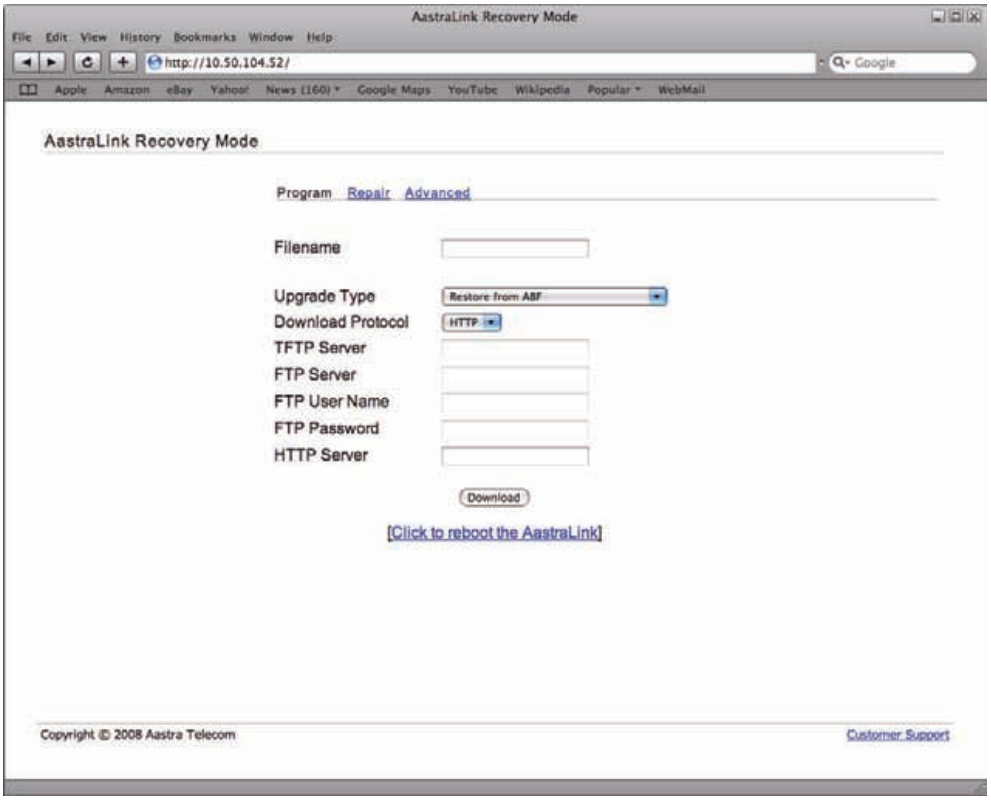
Note: You can contact Technical Support at any time, if necessary, by clicking on the "**Contact Support**" link at the bottom right side of the Recovery Mode UI screen.



Step	Action
1	Confirm that the AastraLink is in recovery mode. The LED should alternate Green/Red/Off to indicate that the device is in recovery mode.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Recovery UI

Step	Action
2	If you have not yet accessed the AastraLink Recovery Mode UI, do this step. (Otherwise, skip ahead to Step 3.) Use your web browser and enter the IP address of the AastraLink: • If you are using DHCP, enter the IP address assigned to the device. For example: http://10.50.20.104 • If you are using a direct, back-to-back connection between the AastraLink WAN port and your PC, then enter the following address: **http://192.168.100.100** The AastraLink Pro 160 Recovery Mode UI displays. 
3	Click the “**Program**” tab.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Recovery UI

Step	Action
4	**Example:** Enter the name of the CF image file that you downloaded from the Aastra web site in the **"Filename"** field. For example, enter: *vnx.dra* **Note:** For HTTP/FTP, you may prefix the file name with an explicit directory path to the location on the server. For example, enter: *pub/temp/firmware/vnx.dra*
5	In the **"Upgrade Type"** field, select the "**CompactFlash (badblock check)**", or "**CompactFlash Card (quick format)"** option. Available selections are: • **Restore from ABF** • **CompactFlash Card (badblock check)** • **CompactFlash Card (quick format)** • **On-board Flash** The "**CompactFlash Card (badblock check)**" allows the CF card to be tested for physical errors before the new firmware is loaded onto it, and takes approximately 30 to 45 minutes. The "**CompactFlash (quick format)**" allows the new firmware to be directly loaded, but without checking for errors, and takes approximately 8 minutes.
6	Specify the **"Download Protocol"** used by the local server as either TFTP, FTP, or HTTP.
7	Enter the IP address or DNS address of the TFTP, FTP, or HTTP server, as appropriate.
8	For FTP, also enter the "**Username**" and "**Password**" required for FTP authentication.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Recovery UI

Step	Action
9	Click **<Download>** to begin the download process. **Note:** The transfer may take up to 30 minutes to complete, depending on the network speed and connection protocol. Do *not* interrupt the transfer during this time, or the system may become unrecoverable. You will see some, or all, of the screens shown in Figure 7-1 as the process completes. When the download is complete, a status window appears indicating that you need to reboot the AastraLink Pro 160 to complete the procedure.
10	After performing the upgrade task, you must reboot the AastraLink Pro. Click **<Click to Reboot the AastraLink>** to reboot the AastraLink.

Downloaded from www.Manualslib.com manuals search engine

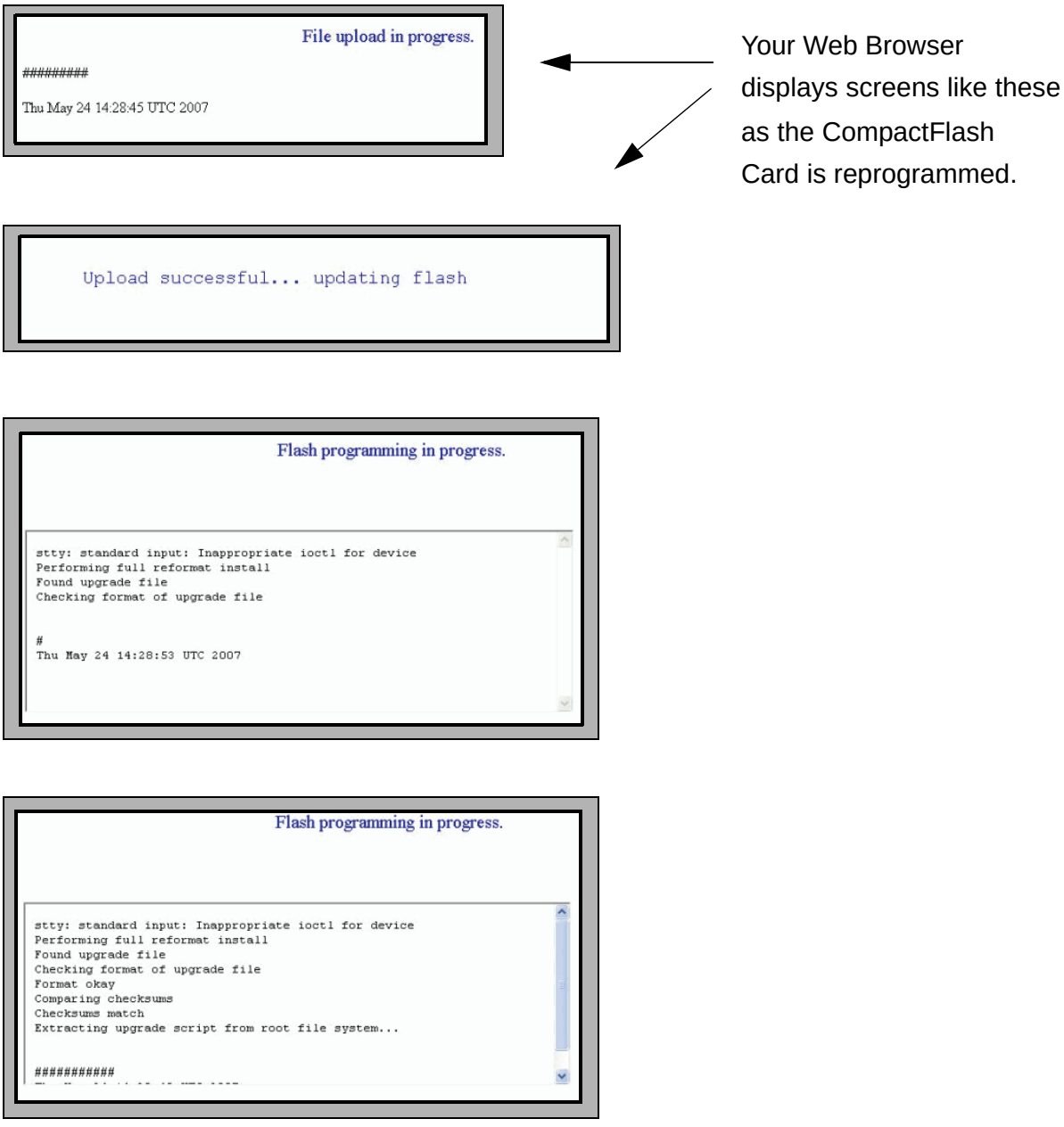

File upload in progress.
#########
Thu May 24 14:28:45 UTC 2007
Your Web Browser displays screens like these as the CompactFlash Card is reprogrammed.
Upload successful... updating flash
Flash programming in progress.
stty: standard input: Inappropriate ioctl for device
Performing full reformat install
Found upgrade file
Checking format of upgrade file
#
Thu May 24 14:28:53 UTC 2007
Flash programming in progress.
stty: standard input: Inappropriate ioctl for device
Performing full reformat install
Found upgrade file
Checking format of upgrade file
Format okay
Comparing checksums
Checksums match
Extracting upgrade script from root file system...
###########

Figure 7-1. AastraLink Recovery Mode Download Screens

Downloaded from www.Manualslib.com manuals search engine

Reprogramming the Onboard Flash

When necessary, you can use the Recovery Mode UI to reprogram the AastraLink Pro 160 Onboard flash (firmware) using the procedure described in this section.

Caution: You should only reprogram the Onboard flash with direction from Aastra support personnel. Incorrect updating of the Onboard flash can make the AastraLink Pro 160 unbootable, requiring the device to be returned to the factory for repair.

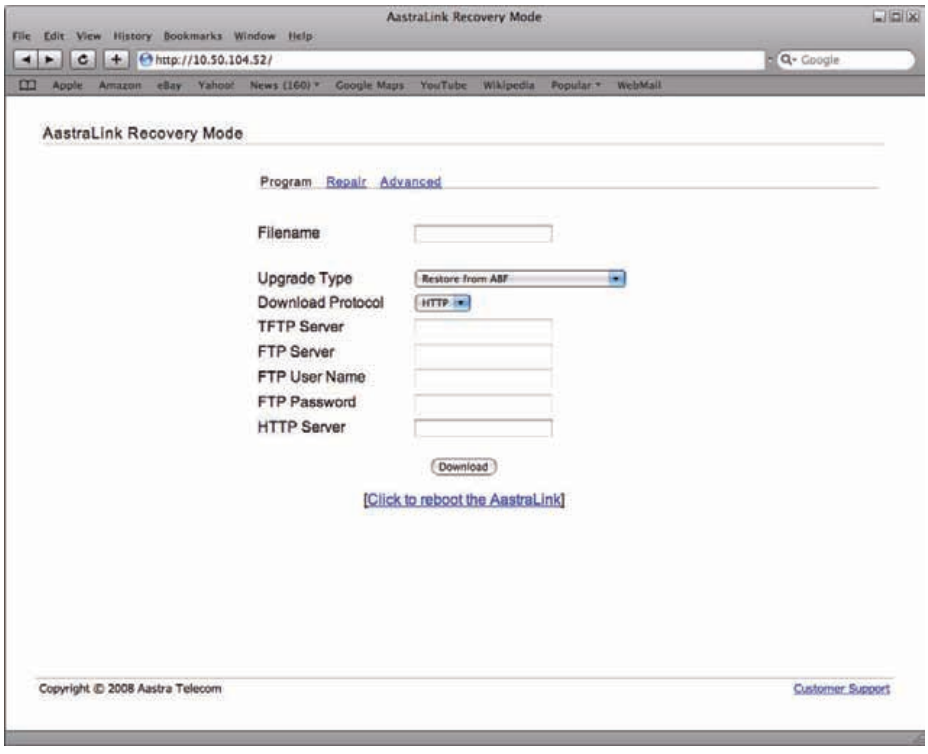
Note: Before you can reprogram the Onboard flash, you must download the *obf.dra* file (see below) from the Aastra support web site, and store the file on a TFTP, FTP, or HTTP server that is accessible to the AastraLink Pro 160 using its LAN connection.

Use the following procedure to reprogram the AastraLink Pro 160 Onboard flash.

Note: You can contact Technical Support at any time, if necessary, by clicking on the "**Contact Support**" link at the bottom right side of the Recovery Mode. UI screen

Downloaded from www.Manualslib.com manuals search engine

AastraLink Recovery UI

Step	Action
1	Confirm that the AastraLink is in recovery mode. The LED should alternate Green/Red/Off to indicate that the device is in recovery mode.
2	If you have not yet accessed the AastraLink Recovery Mode UI, do this step. (Otherwise, skip ahead to Step 3.) • If you are using DHCP, enter the IP address assigned to the device. For example: http://10.50.20.104 • If you are using a direct, back-to-back connection between the WAN port and your PC, then enter the following address: http://192.168.100.100 The AastraLink Pro 160 Recovery Mode UI displays. 
3	Click the “**Program**” tab.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Recovery UI

Step	Action
4	Enter the name of the Onboard flash file that you downloaded from the Aastra web site in the **"Filename"** field. For example, enter: *obf.dra* **NOTE**: For HTTP/FTP, you may prefix the file name with an explicit directory path to the location on the server. For example, enter: *pub/temp/firmware/obf.dra*
5	In the **"Upgrade Type"** field, select the **"On-board flash"** option. Available selections are: • **Restore from ABF** • **CompactFlash Card (badblock check)** • **CompactFlash Card (quick format)** • **On-board Flash**
6	Specify the **"Download Protocol"** used by the local server as either TFTP, FTP, or HTTP.
7	Enter the IP address or DNS address of the TFTP, FTP, or HTTP server, as appropriate.
8	For FTP, also enter the "**Username**" and "**Password**" required for FTP authentication.
9	Click **<Download Firmware>** to begin the download process. **Note:** The transfer may take up to 30 minutes to complete, depending on the network speed and connection protocol. Do *not* interrupt the transfer during this time, or the system may become unrecoverable. When the download is complete, a status window appears indicating that you need to reboot the AastraLink Pro 160 to complete the procedure.
10	After performing the upgrade task, you must reboot the AastraLink Pro. Click **<Click to Reboot the AastraLink>** to reboot the AastraLink.

Downloaded from www.Manualslib.com manuals search engine

Uploading the .abf File to the CompactFlash

After reformatting the CompactFlash card to a factory-default state (either with quickformat or using the extended version with badblock checking), it is possible to restore a previous AastraLink Backup File (*.abf*) so that the system reboots into the previous configured state, rather than as a default greenfield.

Use the following procedure to upload an .abf file to the CompactFlash.

Note: You can contact Technical Support at any time, if necessary, by clicking on the "**Contact Support**" link at the bottom right side of the Recovery Mode. UI screen.

AastraLink Recovery UI

Step	Action
1	At the end of the CompactFlash card flash programming, the Web UI displays an optional link to return to the front page. Click on this link and change the '**Upgrade Type**' to '**Restore from ABF**' . This allows upload of an *.abf* file to the CompactFlash (assuming the *.abf* file is present on the TFTP/ FTP/HTTP server).
2	After performing the upgrade task, you must reboot the AastraLink Pro. Click **<Click to Reboot the AastraLink>** to reboot the AastraLink. The system configuration extracts from the uploaded *.abf* file and service resumes, with all previous voicemail and system configuration restored.

Downloaded from www.Manualslib.com manuals search engine

Repairing the File System, Bad Block, and or Database

When necessary, you can use the Recovery Mode UI to repair the following on the AastraLink Pro:

- Perform filesystem checks (force or verbose) and automatically repair it.
- Perform a bad block test and rewrite it if required.
- Download a database or revert to the previous database if required.

Use the following procedure to perform repair tasks using the AastraLink Recovery Mode.

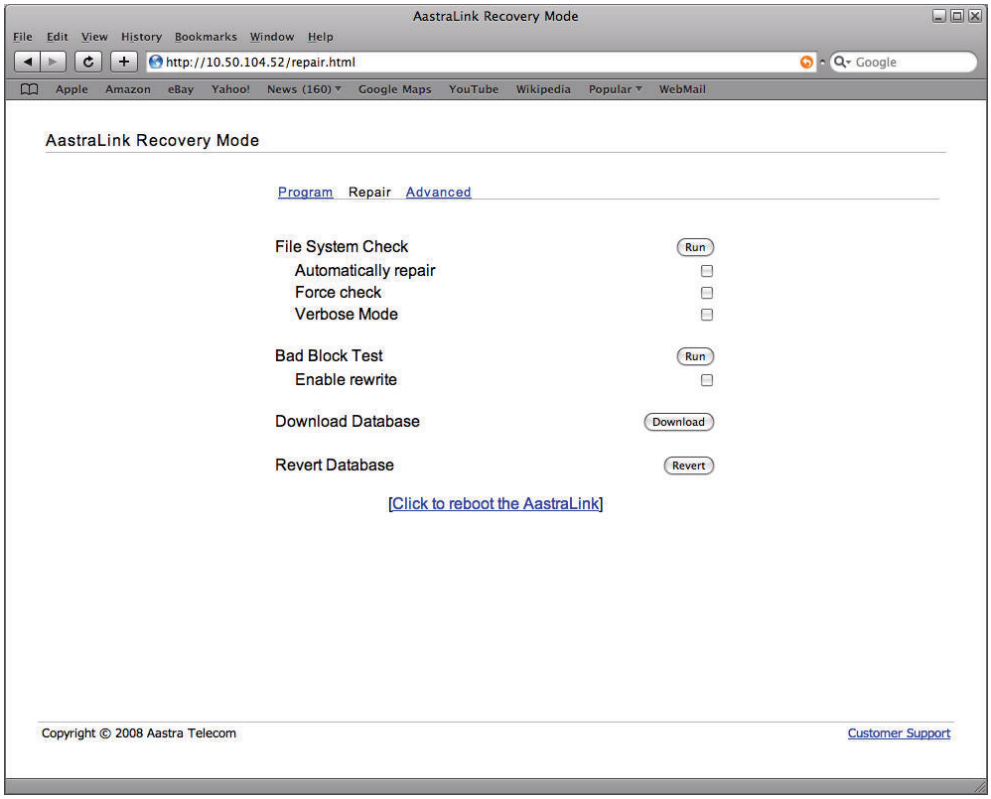
Note: You can contact Technical Support at any time, if necessary, by clicking on the "**Contact Support**" link at the bottom right side of the Recovery Mode. UI screen.

AastraLink Recovery UI

Step	Action
1	Confirm that the AastraLink is in recovery mode. The LED should alternate Green/Red/Off to indicate that the device is in recovery mode.
2	If you have not yet accessed the AastraLink Recovery Mode UI, do this step. (Otherwise, skip ahead to Step 3.) • If you are using DHCP, enter the IP address assigned to the device. For example: http://10.50.20.104 • If you are using a direct, back-to-back connection between the WAN port and your PC, then enter the following address: http://192.168.100.100 The AastraLink Pro 160 Recovery Mode UI displays.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Recovery UI

Step	Action
3	Click the "**Repair**" tab. 
File System Check and Repair	
4	In the **File System Check** section, place a checkmark in the "**Force Check**" and/or "**Verbose Mode**" fields as applicable to specify the type of check you want to perform on the file system. To automatically repair the file system after running a check, place a checkmark in the "**Automatically Repair**" field.
5	Click **<Run>**. If you enabled "**Automatically Repair**", the system runs a check on the filesystem and automatically repairs it if required.
Bad Block Test and Rewrite	
6	In the **Bad Block Test** section, place a checkmark in the "**Enable rewrite**" field to rewrite the bad blocks after the test is performed.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Recovery UI

Step	Action
7	Click **<Run>**. If you enabled "**Enable rewrite**", the system runs the bad block test and then automatically rewrites it if required.
Download Database	
8	To download a database to the AastraLink Pro, click the **<Download>** button.
Revert Database	
9	To revert to the previous database on the AastraLink Pro, click the **<Revert>** button.
10	After performing any of the above repair tasks, you must reboot the AastraLink Pro. Click **<Click to Reboot the AastraLink>** to reboot the AastraLink.

Downloaded from www.Manualslib.com manuals search engine

Advanced Recovery Mode Tasks (Netconsole)

When necessary, you can perform more advanced tasks with the Recovery Mode UI such as using Netconsole. Netconsole is a helpful tool for debugging kernel issues where you need to capture and analyze kernel messages from a crashed or hanging server when disk logging or serial consoles are unavailable.

When kernel boot messages need to be saved after a server crash/hang but access to a serial console is not available, you can use the Netconsole tool to send boot kernel printk messages to another host on the network using UDP packets.

Use the following procedure to perform Netconsole tasks using the AastraLink Recovery Mode.

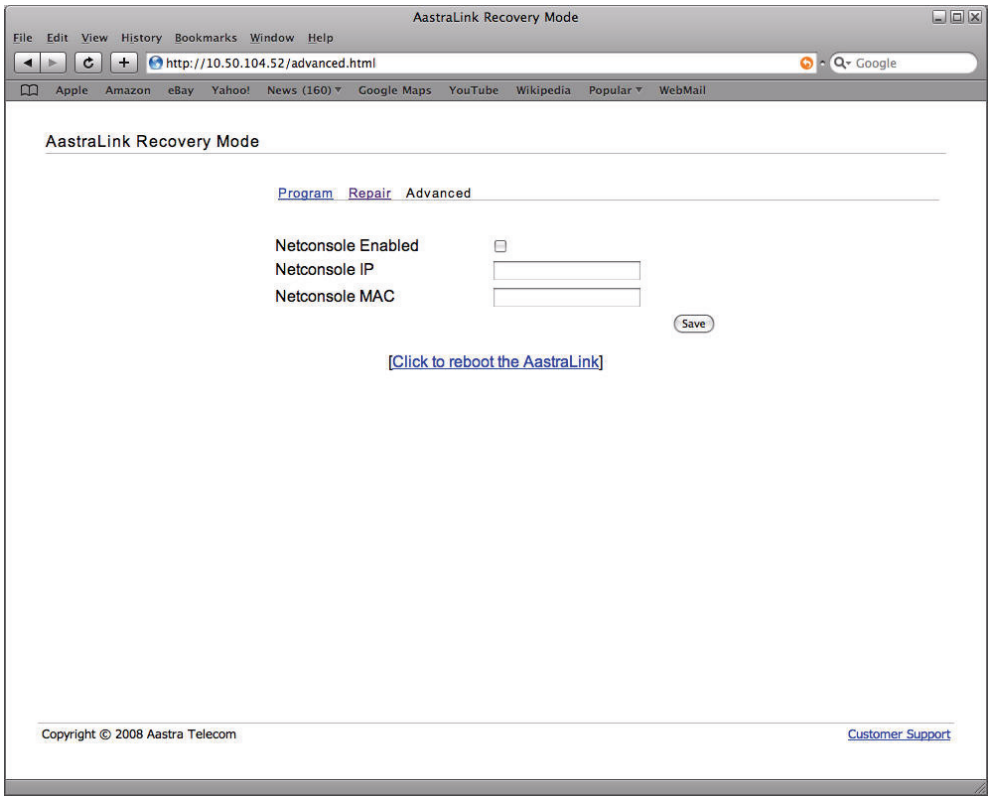
Note: You can contact Technical Support at any time, if necessary, by clicking on the "**Contact Support**" link at the bottom right side of the Recovery Mode. UI screen.

AastraLink Recovery UI

Step	Action
1	Confirm that the AastraLink is in recovery mode. The LED should alternate Green/Red/Off to indicate that the device is in recovery mode.
2	If you have not yet accessed the AastraLink Recovery Mode UI, do this step. (Otherwise, skip ahead to Step 3.) • If you are using DHCP, enter the IP address assigned to the device. For example: http://10.50.20.104 • If you are using a direct, back-to-back connection between the WAN port and your PC, then enter the following address: http://192.168.100.100 The AastraLink Pro 160 Recovery Mode UI displays.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Recovery UI

Step	Action
3	Click the "**Advanced**" tab. 
4	In the "**Netconsole Enabled**" field, place a checkmark in the box to enabale Netconsole.
5	In the "**Netconsole IP**" field, enter the IP address of the host on the network where the printk messages about the kernal are to be stored.
6	In the "**Netconsole MAC**" field, enter the MAC address of the host on the network where the printk messages about the kernal are to be stored.
7	Click **<Save>** to save the information you just entered.
8	After setting the advanced tasks in the previous steps, you must reboot the AastraLink Pro. Click **<Click to Reboot the AastraLink>** to reboot the AastraLink.

Downloaded from www.Manualslib.com manuals search engine

Using AastraLink System and Phone Log Files

To investigate issues specific to interoperability or configuration/operation of Aastra IP phones, the AastraLink Web UI allows you to view system and phone logs, and enable debugging for various events.

To view Aastralink system and phone log files, you must be working in conjunction with Aastra support personnel, and supply a valid login ID and debug password. Contact Aastra support for more information.

Downloaded from www.Manualslib.com manuals search engine

Downloaded from www.Manualslib.com manuals search engine

Appendix A
Remote Office Configuration of the IP Phone *(Phone-Side)*

Introduction

This appendix supplements the *AastraLink Pro 160 Quick Start Administrator's Guide*. It describes how to do the following tasks:

- Register a remote user IP phone at the central site prior to deployment.
- Install an IP phones at a remote site and connect to the AastraLink Pro 160 phone network. (This task can be performed by either the administrator or a user.)
- Reinstall a remote IP phone back at the central site.

Topics

This appendix covers the following topics:

Topic	Page
Preparing To Deploy Remote User Phones	page A-2
Registering IP Phones At the Central Site	page A-4
Connecting To The IP Phone Network From a Remote Office	page A-7
Reinstalling Aastra IP Phones at the Central Site	page A-13

Downloaded from www.Manualslib.com manuals search engine

Preparing To Deploy Remote User Phones

The administrator must do the following three steps *before* deploying Aastra IP phones to a remote site:

1. Enable remote access support on the AastraLink Pro 160, and configure remote access parameters.

   Depending on your network configuration and requirements, you may also choose to configure firewall parameters, specify port mappings, etc. prior to deploying remote user IP phones. See *"Editing Local Service Settings"* on page 4-26 of this guide for instructions.

   Note: Perform either of the following step 2 or step 3, but not both.

2. (Optional) Register the IP phones with the AastraLink Pro 160 at the central site.

   Registering the Aastra IP phones with the AastraLink Pro 160 before deployment ensures that the phones reflect the central site configuration and security parameters. See *"Registering IP Phones At the Central Site"* on page A-4.

3. (Optional) Supply remote users with the following networking information, which allows them to connect to the IP phone network at the central site:

   — IP Address of the AastraLink Pro 160.

   — HTTP port the IP phone will use to communicate with the AastraLink Pro 160 web server.

   As a security restriction to prevent unauthorized use of AastraLink Pro service, remote office IP phones cannot be registered using the external public IP address and port. The phone's MAC address must be added to the AastraLink Pro database either by pre-registering it on the local network first, or by using the <**Add Phone**> option at the location *Users->User List* in the administrator menus.

Downloaded from www.Manualslib.com manuals search engine

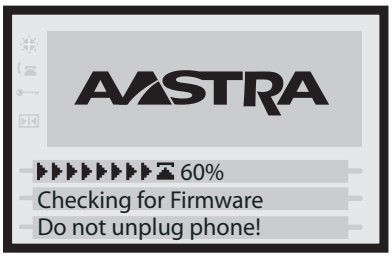
Registering the IP phones by connecting them at the central site is the quickest and easiest method to register the lines with AastraLink Pro and ensure that the IP phone is pre-configured with the public IP address and port previously configured on the AastraLink. Using the <**Add Phone**> feature permits the IP phone to be registered, but does not pre-configure the public address information; therefore, it would be necessary for the end-user to add this at install time.

Once the administrator has completed the steps described above, then users can follow the instructions described in "Connecting To The IP Phone Network From a Remote Office" on page A-7 to install their Aastra IP phones at a remote site, and connect to the AastraLink IP phone network.

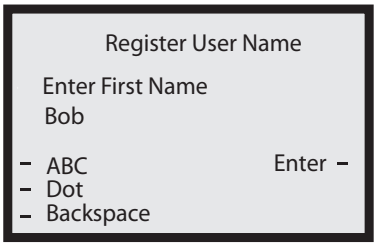
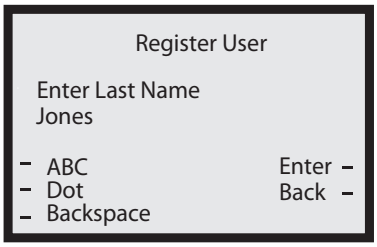
Downloaded from www.Manualslib.com manuals search engine

Registering IP Phones At the Central Site

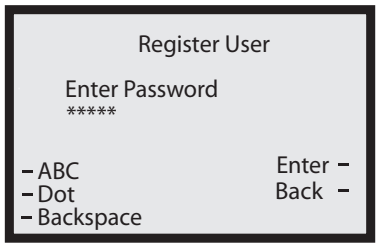
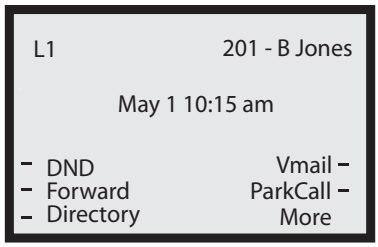
Prior to remote deployment, use the instructions in this section to register an IP phone with the AastraLink device.

Step	Action
1	To begin the setup process, use the supplied RJ45 cables to connect your Aastra IP phone to your Ethernet Hub/Switch. **Note:** See your *AastraLink Pro 160 Quick Start User's Guide* for detailed instructions on setting up and installing your Aastra IP phone.
2	Connect the 48V power cord to your Aastra IP phone. **Notes:** For Ethernet networks that supply in-line power to the phone (IEEE 802.3af): - Use the Ethernet cable (supplied) to connect from the phone directly to the network. - No 48v AC power adapter required. For Ethernet networks that DO NOT supply power to the phone: - Use the 48V AC Power Adapter to connect from the DC power port on the phone to a power source. - Use the Ethernet cable (supplied) to connect from the phone to a network jack. The Aastra IP phone automatically begins the startup sequence as soon as you connect it. The Aastra IP phone checks for new configuration and firmware updates on the AastraLink device. If a new update is found, the phone displays the update it is installing (either "Updating Config" or "New Firmware"). This may take a few moments while the configuration server downloads the latest updates. **Important!** Do not unplug or remove power from the phone while it is checking and installing the firmware. 

Downloaded from www.Manualslib.com manuals search engine

Step	Action
3	To begin the registration process, enter the first name of the IP phone user, then press <**Enter**>. For example: Bob 
4	Enter the last name of the IP phone user, then press <**Enter**>. For example: Jones 
5	(optional) Enter the email address of the IP phone user, then press <**Enter**>. **Note:** To enter the @ symbol, press the # key until the symbol appears.

Downloaded from www.Manualslib.com manuals search engine

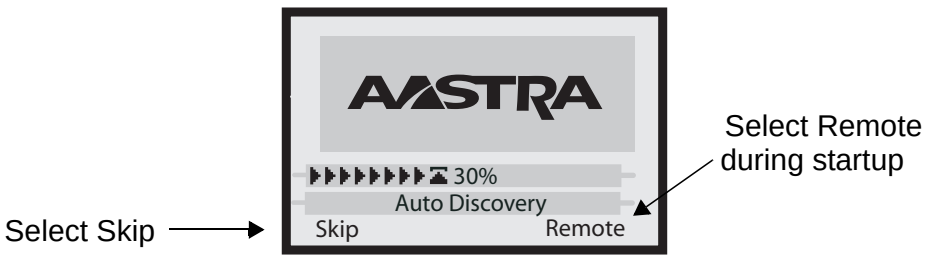
Step	Action
6	Enter the user password, then press <**Enter**>.  Your IP phone reboots. When startup is complete, your phone UI displays the IP address of the Aastralink device. To access the AastraLink Web UI, you enter the address in your web browser.
7	To complete the initialization process, press <**Exit**>. The IP phone Idle screen appears. It shows the user name, extension, date, and the default softkeys configured for the user's phone (large screen displays only). 

Downloaded from www.Manualslib.com manuals search engine

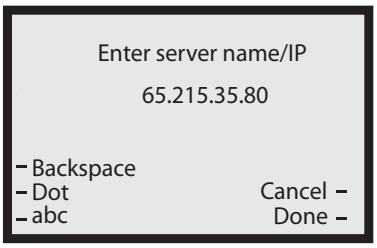
Connecting To The IP Phone Network From a Remote Office

After registering the IP phone at the central site, use the following procedure to connect to the IP phone network from a remote office.

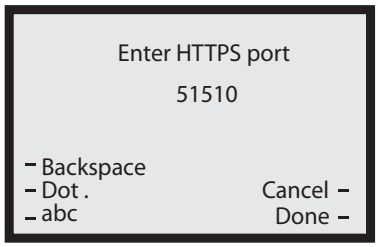
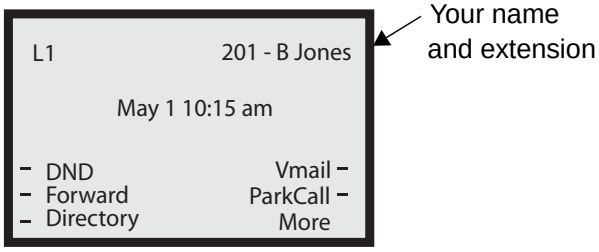
Warning: On remote phones connected to the AastraLink Pro 160, the following emergency related message displays: **"E911 calls are not available from this phone."** Remote IP phone users should **not** make emergency calls using the AastraLink Pro 160, because the location information will be incorrect. E911 regulations in the United States require street address location information be transmitted to the Public Safety Answering Point (PSAP). This information is provided by the telco, using the location of the analogue line connected to the AastraLink Pro 160 Lifeline port (FXO Line 1).

Step	Action
1	Connect the Aastra IP phone to your Ethernet Hub/Router. **Note:** See your *AastraLink Pro 160 Quick Start User's Guide* for instructions on setting up and installing your Aastra IP phone. Your Aastra IP phone powers up, completes its diagnostics, and searches for the AastraLink Pro 160 on the network.
2	Select <**Remote**> to specify that this is a remote IP phone.  **Note:** If for some reason the IP phone is unable to obtain an IP address, then the IP phone UI displays the message "UPnP Device Not Found." If you see this message, skip ahead to the following section "Configuring Port Information" on page A-10 for instructions.

Downloaded from www.Manualslib.com manuals search engine

Step	Action
3	Enter the IP Address of the AastraLink Pro 160 that is located at the central site. For example: `65.215.35.80`  **Note:** If you do not know the IP address of the AastraLink Pro 160, check with your administrator.

Downloaded from www.Manualslib.com manuals search engine

Step	Action
4	Specify the HTTP port the IP phone uses to communicate with the AastraLink Pro 160. For example: 51510  Your Aastra IP phone downloads the latest configuration information from the AastraLink Pro 160 and reboots. When the Idle State Screen appears showing your user name and extension (like the one below), the registration process is complete.
5	Your Aastra IP phone connects to the IP phone network at the central site and is fully operational.  Your IP phone only successfully connects to the AastraLink Pro if its MAC address is pre-provisioned in the Users List at the location *User->User List* in the administrator menus.

Downloaded from www.Manualslib.com manuals search engine

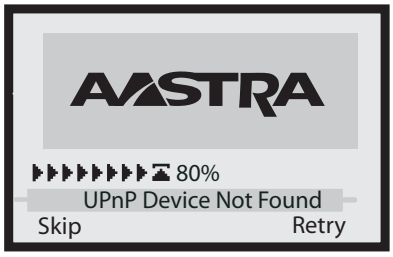
Configuring Port Information

Not all routers support Universal Plug & Play (UPnP), and some may need to have the UPnP support manually enabled. If the Aastra IP phone cannot obtain the public IP address of the router via UPnP, the phone displays the message "*UPnP device not found*." This condition most often occurs if:

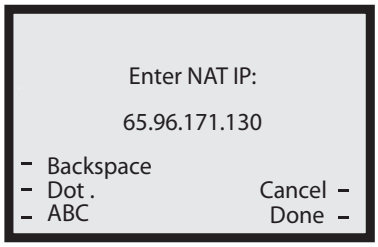
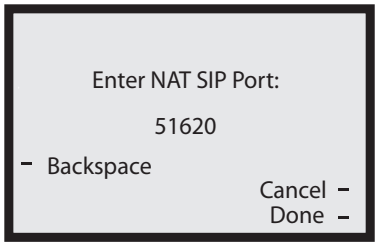
- The remote Aastra IP phone is not installed behind a UPnP enabled router, or
- The Aastra IP phone cannot set up minimal port mappings (for example, if you have multiple devices connected to your router).

So, in order for the Aastra IP phone to communicate with the AastraLink Pro 160, you must use the instructions in this section to manually enter the port mapping information that is configured on your router.

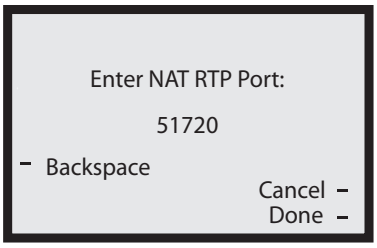
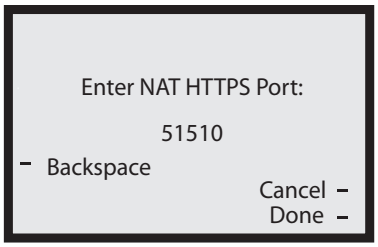
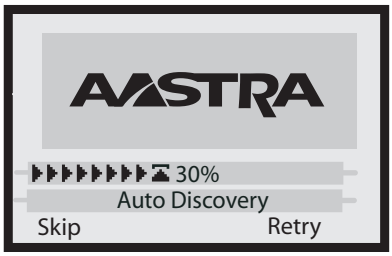
Note: If you do not know the port mappings configured on your router, then refer to your router documentation for more information.

Step	Action
1	If your IP phone UI displays the "UPnP Device Not Found" message shown below, press <**Skip**> to begin manually configuring port mapping parameters. 

Downloaded from www.Manualslib.com manuals search engine

2	Specify the public IP address, or dynamic/static DNS FQDN of your router, then press <**Done**>. For example: 65.96.171.130. 
3	Specify the public SIP port (default 51620) for your router, then press <**Done**>. 

Downloaded from www.Manualslib.com manuals search engine

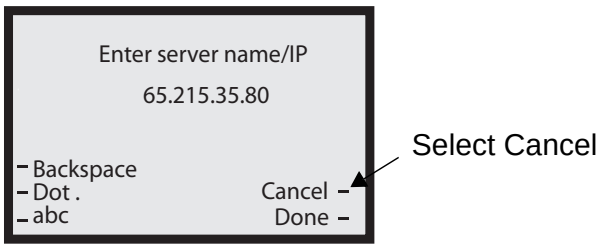
4	Specify the public RTP starting port (default 51720) for your router, then press <**Done**>. 
5	Specify the public HTTP port (default 51510) for your router, then press <**Done**>.  Your AastraLink IP Phone reboots and begins the discovery process. Now, go back to the previous section entitled "Connecting To The IP Phone Network From a Remote Office" on page A-7 and complete steps 2-4 to complete the remote registration procedure. 

Downloaded from www.Manualslib.com manuals search engine

Reinstalling Aastra IP Phones at the Central Site

Use the procedure described in this section to reinstall an IP phone at the central site that had been previously installed at a remote office.

The procedure described below resets the IP phone from “remote mode” to back to “local mode.” If you do not reset the IP phone, it will attempt to boot in remote mode when you install it.

Step	Action
1	Connect the Aastra IP phone to your Ethernet Hub/Router. **Note:** See your *AastraLink Pro 160 Quick Start User’s Guide* for instructions on setting up and installing your Aastra IP phone.
2	Select **<Cancel>** when the IP phone UI prompts you to specify the IP address of the AastraLink at your central site. 
3	Press the **<Options>** key or button on your IP phone.
4	Use the arrow keys to view the options, then select **<Factory Default>**
5	Press **<Show>**
6	Enter the administrator password, then press **<Enter>**
7	Select **<Default>** when prompted to “Reset Phone Back to Factory Defaults.”

Downloaded from www.Manualslib.com manuals search engine

Step	Action
8	Select **<Restart>** when prompted to restart the phone. The IP phone reverts back to its factory default settings.
9	Disconnect, then reconnect, your IP phone to your Ethernet Hub/Router. If your IP phone has been successfully reset to “local mode,” it should start up, retrieve its configuration from the AastraLink, and then prompt you to specify a user name. You can then continue to register the IP phone as describe in the section “Registering IP Phones At the Central Site” on page A-4.

Downloaded from www.Manualslib.com manuals search engine

Appendix B
Remote Office Configuration of the AastraLink Pro 160 (Server-Side)

Introduction

This appendix provides a procedure for manually setting up your AastraLink Pro 160 in your network for a remote office connection.

Topics

This appendix covers the following topics:

Topic	Page
Remote Office Configuration of the AastraLink Pro 160	page B-2
Network Diagram for Remote Phone Setup	page B-2
Configuring the AastraLink Pro 160 for Remote Office Setup	page B-4
AastraLink Pro 160 Manual Remote Office Configuration Example	page B-10

Downloaded from www.Manualslib.com manuals search engine

Remote Office Configuration of the AastraLink Pro 160

Description

The AastraLink Pro 160 is a plug and play unit that you can install in your network. However, to configure the AastraLink Pro 160 for remote office connections, it is recommended you use the information that this Appendix provides.

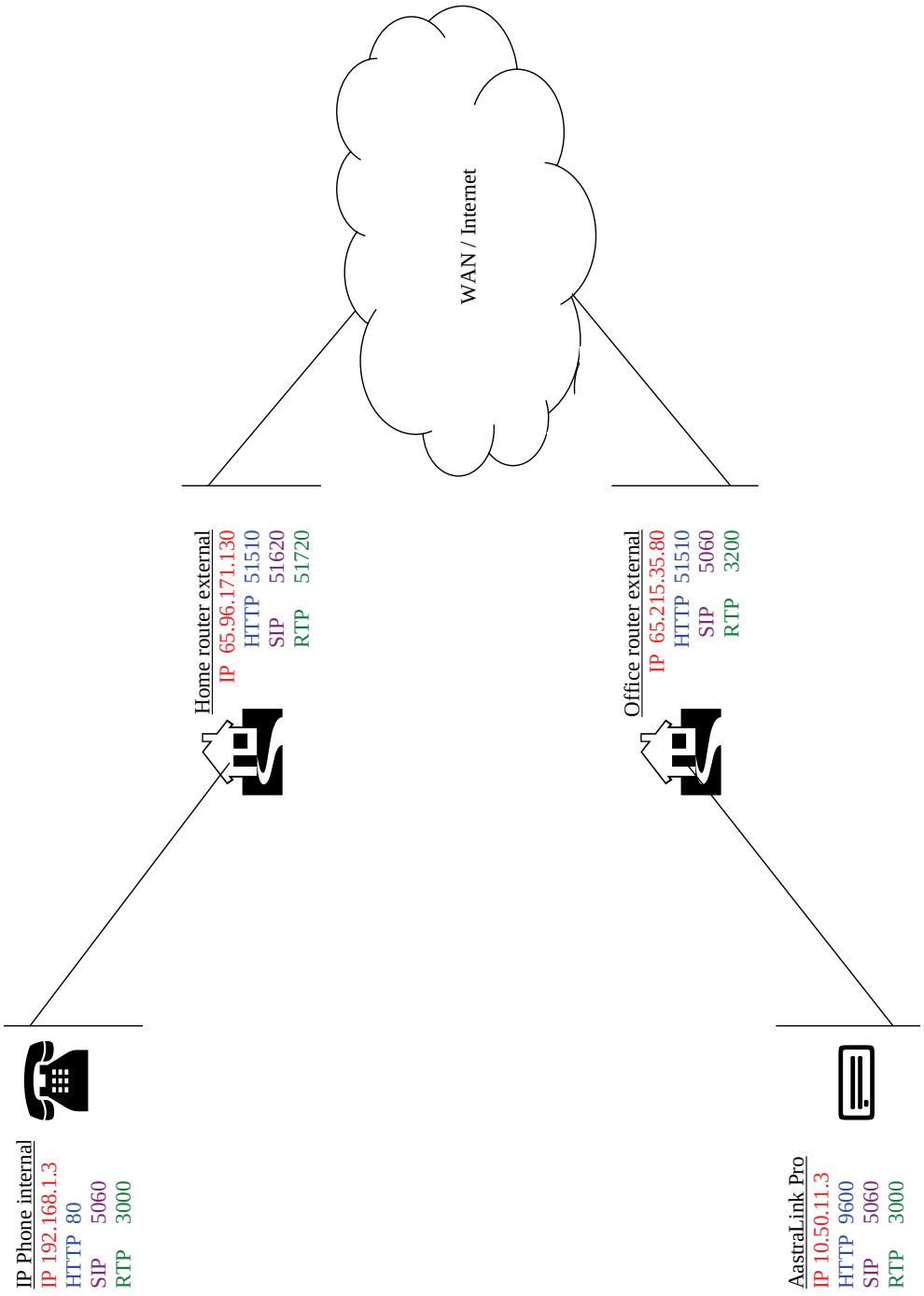
Network Diagram for Remote Phone Setup

The following is a network diagram for Aastralink Pro 160 remote phone setup. When setting up remote office, the user has the option to configure the required port forwarding on the phone-side router or the server-side router automatically, by employing UPnP for UPnP capable routers.*

If UPnP is not supported on the routers, you can manually enter the required port forwarding mappings on the router. Please consult the router's manual for procedure to enter and activate port forwarding rules.

***SOHO router should support NAT, port forwarding, and optionally UPnP.**

Downloaded from www.Manualslib.com manuals search engine



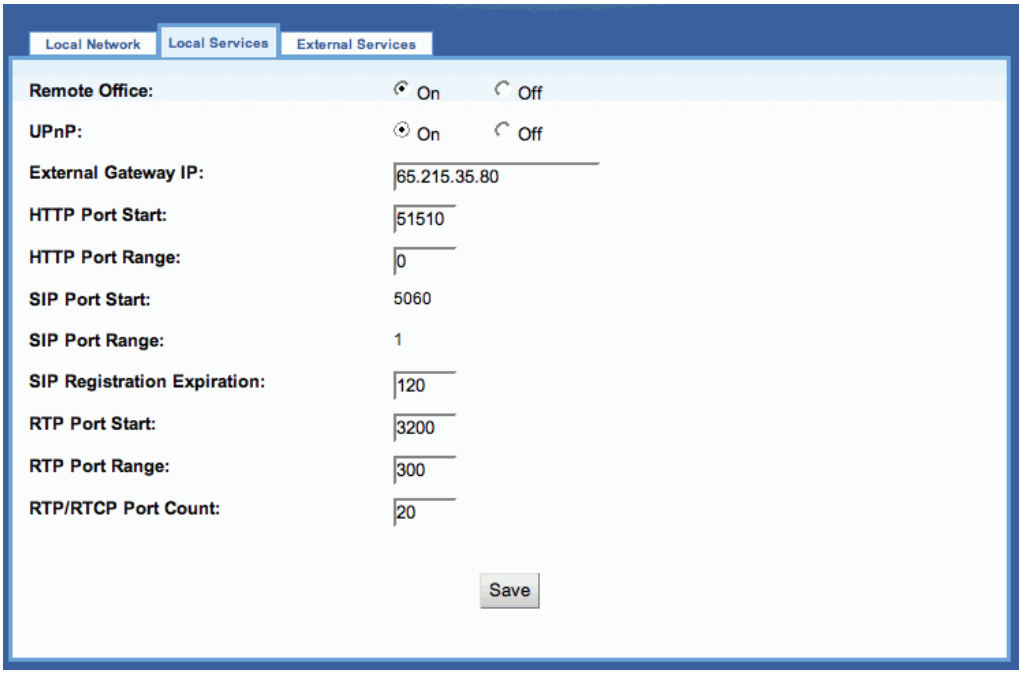
Downloaded from www.Manualslib.com manuals search engine

Configuring the AastraLink Pro 160 for Remote Office Setup

1. UPnP Configuration

Use the following procedure to configure UPnP on the AastraLink Pro 160.

AastraLink Web UI

Step	Action
1	Select **Configuration->Network->Local Services.** 
2	Turn on “**Remote Office**”.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Web UI

Step	Action
3	Turn on "**UPnP**".
4	Click **<Save>** to save your changes. After a successful UPnP with the AastraLink Pro 160, the results are shown in the "**Office Router Port Mapping Table**" on page B-5. **Notes**: **1.** The external gateway IP (router A wan side IP address) of router A is automatically populated to the server. **2.** HTTP port, SIP port, and RTP ports mappings (map router A wan side TCP/UDP ports to the server TCP/UDP ports) are set up on router A automatically according to the default value defined on the server's local server page.

Office Router Port Mapping Table

Active	Protocol	Internal Port	External Port	IP Address
YES	UDP	5060	5060	10.50.11.3
YES	UDP	9600	51510 *See Note Below Table	10.50.11.3
YES	UDP	3000	3200	10.50.11.3
YES	UDP	3001	3201	10.50.11.3
YES	UDP	3002	3202	10.50.11.3
YES	UDP	3003	3203	10.50.11.3
YES	UDP	3004	3204	10.50.11.3
YES	UDP	3005	3205	10.50.11.3
YES	UDP	3006	3206	10.50.11.3
YES	UDP	3007	3207	10.50.11.3
YES	UDP	3008	3208	10.50.11.3
YES	UDP	3009	3209	10.50.11.3
YES	UDP	3010	3210	10.50.11.3

Downloaded from www.Manualslib.com manuals search engine

Active	Protocol	Internal Port	External Port	IP Address
YES	UDP	3011	3211	10.50.11.3
YES	UDP	3012	3212	10.50.11.3
YES	UDP	3013	3213	10.50.11.3
YES	UDP	3014	3214	10.50.11.3
YES	UDP	3015	3215	10.50.11.3
YES	UDP	3016	3216	10.50.11.3
YES	UDP	3017	3217	10.50.11.3
YES	UDP	3018	3218	10.50.11.3
YES	UDP	3019	3219	10.50.11.3

NOTE: For routers with half-cone NAT, or routers that don't allow separate port forwarding, use the value of 9600 instead of 51510.

Column Descriptions

Column	Description
Active	Indicates whether or not the Office Router port mapping is active.
Protocol	Indicates the protocol currently being used on the Office Router port during mapping.
Int. Port	TCP/UDP ports open on AastraLink
Ext. Port	TCP/UDP ports open on t he WAN side of Route A and ready to forward packets to the AastraLink ports in the mapping.
IP Address	AastraLink's IP address

Downloaded from www.Manualslib.com manuals search engine

2. Phone Configuration

If you create an account on the server for the phone in the same subnet as the server, the configuration automatically downloads to the phone.

If you create the phone's account on the server using the Web UI to add phones, the remote phone does not have the configuration required to initiate communication with the server. Users must enter the server's external gateway IP and HTTP port from the phone's TUI prompt upon remote installation.

3. Remote Phone Installation

Pre-stage phone

Press **<Remote>** when the Auto-Discovery screen is presented in TUI.

Non Pre-stage phone

Press **<Remote>** and enter the external gateway IP (e.g. 65.215.35.80) and HTTP port start (e.g. 51510) when TUI prompts.

Note: For routers with half-cone NAT, or routers that don’t allow separate port forwarding, use the value of 9600 instead of 51510.

Upon a successful dialogue with the server and with the pre-configuration or downloaded configuration, the phone automatically initiates port mapping setups with Home Router using UPnP.

Downloaded from www.Manualslib.com manuals search engine

The following table is the port mapping table after a successful UPnP session with the phone-side Home Router.

Home Router Port Mapping Table

	Action	Name	Source	Destination	Protocol
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 5060-51620
☑	Allow		WAN, *	LAN, 192.168.1.3	TCP, 80-51510
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3000-51720
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3001-51721
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3002-51722
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3003-51723
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3004-51724
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3005-51725
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3006-51726
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3007-51727
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3008-51728
☑	Allow		WAN, *	LAN, 192.168.1.3	UDP, 3009-51729
☑	Deny	Default	* , *	LAN, *	*, *
☑	Allow	Default	LAN, *	* , *	* , *

Downloaded from www.Manualslib.com manuals search engine

Column Descriptions

Column	Description
Action	Indicates whether or not the phone is allowed to Ping the WAN port. Valid values are Allow and Deny.
Name	Indicates a name for the port mapping.
Source	Source of the port mapping (WAN or LAN)
Destination	Phone IP address
Protocol	Protocol used for the port mapping. • Phone UDP/TCP port open (3000, 3001,...) • Home Router WAN-side UDP/TCP open (51720, 51721,...etc. These ports are ready to forward the packets to the corresponding phone ports in the mapping.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Pro 160 Manual Remote Office Configuration Example

The following is an example of setting up the AastraLink Pro 160 for a remote office.

Notes:

1. The SIP and HTTP ports both require one mapping only. The RTP ports require a range of 10 ports per phone.

2.The number of phones you can install behind the same SOHO router is limited by the available port mapping entries on the routers. In many cases, they are sufficient for three phones behind the same routers.

AastraLink Pro 160 Remote Office Configuration

Step	Action
Configure the AastraLink Pro 160	
1	Turn on remote office.
2	Enter the external gateway IP address.
3	(Optional) Modify the settings in the local services as applicable to your network.
4	Click **<Save>**.
Configure Port Forwarding	
5	Manually setup the required port forwarding on the Office Router and Home Router. **Note:** Refer to the Office Router Port Map settings on page B-5, and Home Router Port Map settings on page B-8.
Configure the Remote IP Phone	
6	Configure the IP Phone as described in “2. Phone Configuration” on page B-7.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Pro 160 Remote Office Configuration

Step	Action
Install the Remote IP Phone (Pre-Stage Phone)	
7	Press **<Remote>** when remote phone is in the Auto-Discovery screen. If the phone cannot find a UPnP enabled device, it displays "*UPnP device not found*". Press **<Skip>**. The phone prompts for the NAT IP address.
8	Enter the Home Router WAN-side IP address. For example: 65.96.171.130 The phone prompts for the SIP port.
9	Enter the SIP port for the Home Router. For example, you can enter 51620. The Phone prompts for an RTP port.
10	Enter the RTP port for the Home Router. For example, you can enter 51720. The Phone prompts for an HTTPS port.
11	Enter the HTTPS port for Home Router. For example, you can enter 51510. **Note:** For routers with half-cone NAT, or routers that don't allow separate port forwarding, use the value of 9600 instead of 51510.
Install the Remote IP Phone (Non-pre-Stage Phone)	
12	Press **<Remote>** and enter the server external gateway IP address (for example, 65.215.35.80). The Phone prompts for an HTTP port.
13	Enter the HTTP port start (for example, 51510). **Note:** For routers with half-cone NAT, or routers that don't allow separate port forwarding, use the value of 9600 instead of 51510. The Phone prompts for a NAT IP address.
14	Enter the Home Router WAN-side IP address. The phone prompts for the SIP port.

Downloaded from www.Manualslib.com manuals search engine

AastraLink Pro 160 Remote Office Configuration

Step	Action
15	Enter the SIP port for the Home Router. For example, you can enter 51620. The Phone prompts for an RTP port.
16	Enter the RTP port for the Home Router. For example, you can enter 51720. The Phone prompts for an HTTPS port.
17	Enter the HTTPS port for the Home router. For example, you can enter 51510. **Note:** For routers with half-cone NAT, or routers that don't allow separate port forwarding, use the value of 9600 instead of 51510. After the phone reboots into service, the Users List shows it as a remote device. **Remote Device**

Downloaded from www.Manualslib.com manuals search engine

Index

A

AastraLink
- backing up system software 5-12
- chassis 1-12
- dial plan 4-40
- features list 1-2
- hardware, software requirements 1-11
- LED 7-3
- overview 1-2
- performance, maximizing 6-10
- phone compatibility 1-1
- rebooting 7-5
- registering IP phones A-4
- restoring configuration, voicemail 5-14
- restoring factory default settings 7-7
- system
  - language 4-8
  - settings 4-4
  - status 5-4
- updating system software 5-15
- Web UI 2-2

abbreviations, configuring 4-67

account types 3-7

administrator
- logging in 2-2
- menu options 2-6
- password, 4-43

auto-attendant
- configuring 4-112
- custom greeting 4-134
- schedule 4-126

auto-configuration, IP phone 6-3

B

backing up system software 5-12

barred numbers, list 4-55

BLF, softkey 3-58

C

cables 1-11

call forward, softkey 3-57

call list, softkey 3-61

CDR reports 5-9

chassis 1-12

CompactFlash card, reprogramming 7-17

conference, softkey 3-59

configuration database 5-14

configuring
- AastraLink trunking 4-89
- abbreviations 4-67
- auto-attendant 4-112
- barred numbers 4-55
- DHCP 4-25
- emergency dial plan 4-54
- local service settings 4-26
- music on hold 4-11
- network settings 4-22
- remote office support 4-27
- router port mapping A-10
- SIP trunking 4-76
- softkeys 3-54
- system settings 4-4
- UPnP 4-27
- visual voicemail settings 4-13
- VOiP 4-74

connection mode, viewing 5-4

Downloaded from www.Manualslib.com manuals search engine

D

date and time, setting 4-10
deleting
  barred numbers 4-56
  default softkeys 3-62
  ring groups 3-53
DHCP, configuring 4-25
dial plan 4-40
  configuring 4-38
  emergency 4-54
directed call pickup, softkey 3-58
directory, softkey 3-60
do not disturb, softkey 3-57

E

email
  user or administrator 3-7
emergency call support 1-9
emergency dial plan, defining 4-54
extensions
  dial plan 4-40

F

factory default settings
  restoring 7-7
features list 1-2
find me - follow me, softkey 3-57
FXO lines, status 5-4
FXO tuning
  manually setting parameters for 4-17
  running the Tuning Wizard 4-18

G

gateway, external 4-28
greeting, recording 4-134
groups, ring 3-38

H

hardware requirements 1-11
holiday schedule, configuring 4-130
host name, editing 4-22
HTTP, parameters 4-28

I

intercom, softkey 3-59
IP Address
  AastraLink, obtaining 6-9
  editing 4-23
IP phones
  auto-configuration 6-3
  lifeline 1-9
  MAC Address 3-8
  models 1-1
  registering A-4
  reinstalling A-13
  remote office A-7
  SIP DID Number 3-9
ipp.dra, file 5-15

L

languages, configuring 4-8
LED
  location of 1-12
  monitoring 7-3
lifeline phone 1-9
log files, accessing 7-31

M

maintaining, AastraLink 5-3
MBU handsets 3-8
mbu.dra, file 5-15
Menu Options 2-6
music on hold, configuring 4-11

Downloaded from www.Manualslib.com manuals search engine

N

network addressing 6-3
network settings, local 4-22
network, sample 1-5
NTP Address 4-34

O

obf.dra, file 5-15
onboard flash, reprogramming 7-22
Operator
  assigning 3-7
  privileges 1-13
overview, AastraLink 1-2

P

Page All, softkey 3-59
park call, softkey 3-57
password
  administrator 4-43
  user or administrator 3-7
port forwarding 4-30
port mapping, router A-10
prefix digit, trunking 4-77, 4-89
private extensions 3-6
privileges 1-13
push button trigger 4-12

R

rebooting
  using the reset switch 7-6
  using the Web UI 7-5
recovery mode
  automatic 7-12
  description of 7-11
  manual 7-13
  using the recovery mode UI 7-14
relay
  configuring 4-12
  softkey 3-61
remote office phones, registering A-1
remote office support, enabling 4-27
reprogramming
  CompactFlash card 7-17
  onboard flash 7-22
requirements
  hardware 1-11
  software 1-13
reset switch, locating 7-6
restoring factory default settings 7-7
ring groups, configuring 3-38

S

schedule, auto-attendant 4-126
secondary non-Aastra phones and softclients 3-31
secondary non-Aastra SIP terminals and softclients 3-6
services, softkey 3-60
SIP trunking 4-76
SLA enabled 3-6
SMTP relay address 4-35
softkeys
  configuring default 3-55
  restoring to factory default 3-65
  types 3-56
  using 6-5
software requirements 1-13
speed dial, softkey 3-57
star codes 4-41
system software
  backing up 5-12
  updating 5-15

T

transfer, softkey 3-59
trouble-shooting 7-1
trunking
  AastraLink 4-89
  SIP 4-76

Downloaded from www.Manualslib.com manuals search engine

U

updating, system software 5-15
UPnP 4-27
user accounts, enabling and disabling 3-6
users
  adding accounts and phones for 3-5
  deleting accounts for 3-27
  editing accounts for 3-15
  logging in 2-2
  privileges 1-13

V

viewing
  call records 5-9
  IP Address 6-9
  system status 5-4
vnx.dra, file 5-15
voicemail
  restoring 5-14
  softkey 3-60
  system limit 4-16
  visual, configuring 4-15
VoIP, configuring 4-74

W

Web UI
  accessing 2-2
  administrator menu options 2-6
Windows Explorer 2-4

Downloaded from www.Manualslib.com manuals search engine

Warranty, regulatory, safety, and copyright / licensing notices

Warranty - Aastra Telecom, Inc.

Aastra Telecom Inc. ("Aastra") warrants ("Warranty") to its customer that: (i) Aastra has good and marketable title to the Product at the time of delivery to its customer, free and clear of any and all security interests, liens, claims, charges or encumbrances; and (ii) the Product shall be free from defects in design, material and workmanship and shall perform in accordance with the Aastra specifications in all material respects when used for the intended purpose for a period of twelve (12) months from the date of purchase of the Product by such customer from Aastra ("Warranty Period"). This Warranty specifically excludes any representation, warranty, condition or other term relating to any software contained in the Product. At its sole option, Aastra shall either repair or replace defective Product returned during the Warranty Period. Any repaired or replacement Product shall subsequently be covered for the balance of the original Warranty Period or ninety (90) days, whichever is longer. Upon customer's specific request, Product that fails after the Warranty Period expires may be returned for repair at the then current rates, with the cost of such repairs and shipping to be borne by customer.

Customer shall obtain a "returned material authorization" ("RMA") number from Aastra and comply with shipping instructions for all defective Products being returned to Aastra. Defective Products shall be returned to Aastra at the customer's sole expense. Aastra shall repair or replace defective Products returned under Warranty at no charge to customer, and Aastra shall bear the expense of the return shipment of the repaired or replacement Product to customer.

Aastra does not warrant the Product to be compatible with the equipment of any particular telephone company, or their network. This Warranty does not extend to Products damaged by improper installation or operation, alteration, accident, neglect abuse, misuse, fire or natural causes such as storms or floods. Aastra reserves the right to use refurbished parts in the repair or replacement of defective Products. Unauthorized modification or repair will void the Warranty.

To exercise the Aastra VNX Warranty,:

1. First contact your reseller for instructions.
2. Alternatively, you can contact Aastra Telecom at 1-866-599-7399.

Warranty Limitation

THE FOREGOING PRODUCT WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES AS TO THE CONDITION, OPERATION AND PERFORMANCE OF THE PRODUCT, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES AND/OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. AASTRA'S SOLE AND EXCLUSIVE LIABILITY, AND CUSTOMER'S SOLE AND EXCLUSIVE REMEDY, FOR ANY AASTRA BREACH OF WARANTIES HEREUNDER SHALL BE AASTRA'S OBLIGATION TO REPAIR OR REPLACE THE PRODUCT, AS SET FORTH IN THIS SECTION, AND AASTRA SHALL NOT BE LIABLE FOR ANY DAMAGES WHATSOVER, INCLUDING BUT NOT LIMITED TO DIRECT, INDIRECT, INCIDENTIAL OR CONSEQUENTIAL DAMAGES OF ANY KIND OR NATURE, OR OTHER LOSS, DAMAGE OR EXPENSE DIRECTLY OR INDIRECTLY ARISING FROM CUSTOMER'S USE OF OR INABILITY TO USE PRODUCT, EITHER SEPARATELY OR IN COMBINATION WITH OTHER EQUIPMENT.

Downloaded from www.Manualslib.com manuals search engine

Regulatory information

U.S.A. requirements

The AASTRA VNX has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the Federal Communications Commission (FCC) rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users will be required to take whatever measures may be necessary to correct the interference at their own expense.

Do not attempt to repair or modify this equipment. All repairs must be performed by Aastra Telecom, or an authorized Aastra Telecom representative.

FCC Part 68 general information

The AASTRA VNX complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the bottom of this equipment is a label that contains, among other information, a product identifier in the format US:2L4DDNANAASTRA01. If requested, this number must be provided to the telephone company.
This Aastra VNX uses the following USOC RJ-48 jacks:

Interface	Service Code	Facility Code
1.544 Mb/s superframe format (SF) without line power	6.0Y	04DU9-BN
1.544 Mb/s superframe format (SF) and B8ZS without line power	6.0Y	04DU9-DN
1.544 Mb/s ANSI extended superframe format (ESF) without line power	6.0Y	04DU9-1KN
1.544 Mb/s ANSI extended superframe format (ESF) and B8ZS without line power	6.0Y	04DU9-1SN

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

If the AASTRA VNX causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facility, equipment, operations or procedures that could affect the operation of the AASTRA VNX. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

Downloaded from www.Manualslib.com manuals search engine

If you experience trouble with this equipment, please contact Aastra Telecom for repair and warranty information. If there is a problem with the network, the telephone company may request that you remove the equipment from the network until the problem is resolved.

Aastra Telecom recommends that you install an AC surge protector in the AC outlet to which the equipment is connected. This helps to prevent damage to the equipment caused by local lightning strikes or other electrical surges.

THE AASTRA VNX HAS NO USER SERVICEBLE PARTS.

FCC and telephone company procedures and requirements

In order to connect this equipment to the network, you must provide the local telephone company with the registration number of this equipment, and you must order the proper connections.

To order the proper service, provide the telephone company with the following information:

- Number of required jacks and their USOC numbers
- Sequence in which the trunks are to be connected
- Facility interface codes, by position

CSA certification - U.S. and Canada

This equipment has been certified by CSA for use in the U.S. and Canada to the requirements of UL 1950. Third Edition - Safety of Information Technology Equipment. Including Electrical Business equipment and Canadian Standards Association CAN/CSA C22.2 No. 950-95 Third Edition.

Canadian requirements

Canadian Department of Communications Radio Interference Regulations

This digital apparatus (Aastra VNX) does not exceed the Class A limits for radio-noise emissions from digital apparatus, as documented in the Radio Interference Regulations of the Canadian Department of Communications.

Règlement sur le brouillage radioélectrique du ministère des Communications

Cet appareil numérique (Aastra VNX) respecte les limites de bruits radioélectriques visant les appareils numériques de classe A prescrites dans le Règlement sur le brouillage radioélectrique du ministère des Communications du Canada.

Canada CS-03 rules and regulations

NOTICE: This equipment meets the applicable Industry Canada Terminal Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment."

NOTE: The Canadian Department of Communications label identifies certified equipment. The certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, ensure that it is permissible to connect to the facilities of the local telecommunications company. You must install this equipment using an acceptable connection method.

Downloaded from www.Manualslib.com manuals search engine

Repairs to certified equipment should be made by a supplier-designated representative. If you make repairs or alterations to this equipment, or if the equipment malfunctions, the telecommunications company may request that you disconnect the equipment.

You should ensure, for your own protection, that the electrical ground connections for the power utility, telephone lines, and internal water-pipe system, if present, are connected. This precaution may be particularly important in rural areas.

CAUTION: You should not attempt to make such connections. You should contact the appropriate inspection authority or electrician.

Canada CS-03 Règles et règlements

« AVIS : Le présent matériel est conforme aux spécifications techniques d'Industrie Canada applicables au matériel terminal. Cette conformité est confirmée par le numéro d'enregistrement. Le sigle IC, placé devant le numéro d'enregistrement, signifie que l'enregistrement s'est effectué conformément à une déclaration de conformité et indique que les spécifications techniques d'Industrie Canada ont été respectées. Il n'implique pas qu'Industrie Canada a approuvé le matériel. »

NOTE: L'étiquette du ministère des Communications du Canada indique que l'appareillage est certifié, c'est-à-dire qu'il respecte certaines exigences de sécurité et de fonctionnement visant les réseaux de télécommunications. Le ministère ne garantit pas que l'appareillage fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer l'appareillage, s'assurer qu'il peut être branché aux installations du service de télécommunications local. L'appareillage doit aussi être raccordé selon des méthodes acceptées.

Les réparations de l'appareillage certifié devraient être confiées à un service désigné par le fournisseur. En cas de réparation ou de modification effectuées par l'utilisateur ou de mauvais fonctionnement de l'appareillage, le service de télécommunications peut demander le débranchement de l'appareillage.

Pour leur propre sécurité, les utilisateurs devraient s'assurer que les mises à la terre des lignes de distribution d'électricité, des lignes téléphoniques et de la tuyauterie métallique interne sont raccordées ensemble. Cette mesure de sécurité est particulièrement importante en milieu rural.

ATTENTION: Les utilisateurs ne doivent pas procéder à ces raccordements, mais doivent plutôt faire appel aux pouvoirs de réglementation en cause ou à un électricien, selon le cas.

Downloaded from www.Manualslib.com manuals search engine

European requirements

EMI/EN 55 022 statement

This certifies that the Aastra VNX IP Network Exchange is shielded against the generation of radio interference in accordance with the application of Council Directive 89/336/EEC. Conformity is declared by the application of EN 55 022:1998 and EN 55 024:1998.

WARNING: This is a Class A product. In a residential area, this product may cause radio interference, in which case the user may be required to take the appropriate measures.

EC declaration of conformity

This product conforms to the provisions of Council Directive's EMC Directive (89/336/EEC), Low Voltage Directive (73/23/EEC), and R+TTE Directive (1999/5/EC).

Downloaded from www.Manualslib.com manuals search engine

Safety warnings

General warnings

The following safety warnings apply:

- Mechanical hazards and electrical shock hazards are possible if you remove one or more of the modules. There are no operator-serviceable modules. Only qualified personnel should service this equipment.
- This equipment must be connected to a protective ground according to the instructions in this manual. Improper grounding may result in electrical shock.
- This equipment does not provide safety isolation between any port that is connected to a digital network termination point or any port to which terminal equipment is connected.
- The wall circuit breaker provides the main protection for this equipment.
- Ensure that rack installation does not result in airflow blockage to power supply vents or chassis vents.
- Before installing the Aastra VNX rackmount version, ensure that the rack is sturdy and well-secured.

Lithium battery caution

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

ATTENTION: Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

Compliances

The Aastra VNX is in compliance with regulations as follows:

- Environmental
- 32-104° F (0-40° C)
- Humidity 10-85% non-condensing
- 400 BTUs/hour
- 28 dBA maximum acoustic noise
- Safety Certifications
- cUL 950, NTRL/UL 1950, TUV EN 60 950
- Telecom Approvals
- FCC Part 68, Industry Canada, CTR4
- EMI/RF
- FCC Part 15 Class A, EN55022 Class A (CISPR), EN55024

Downloaded from www.Manualslib.com manuals search engine

Software licensing and copyright

The Aastra VNX product consists of an Aastra designed hardware platform distributed with embedded Linux operating system and application software. This embedded software consists of multiple Aastra and third party programs; each individual program may be subject to one or more Copyrights or Software Licenses; the overall aggregation and distribution of these separate programs is protected as a collective work, Copyright © Aastra Telecom Inc. 2005.

Use and distribution of the VNX product are deemed to be acceptance of the Software Licensing terms contained within the *Aastra VNX Service Level Agreement.* Associated third party license agreements and applicable Open Source software licenses are incorporated by reference; the full text of all licenses can be found on the Aastra VNX documentation CDROM.

For full licensing information, refer to document **41-001204-02** available from Aastra Support, or the AastraLink Pro online Administators Web User Interface.

Downloaded from www.Manualslib.com manuals search engine

Downloaded from www.Manualslib.com manuals search engine

Downloaded from www.Manualslib.com manuals search engine

AastraLink Pro 160

Administrator Guide

Published in the USA

41-001190-02 REV 01
AastraLink Pro 160 Release 1.2
November 2008

Downloaded from www.Manualslib.com manuals search engine